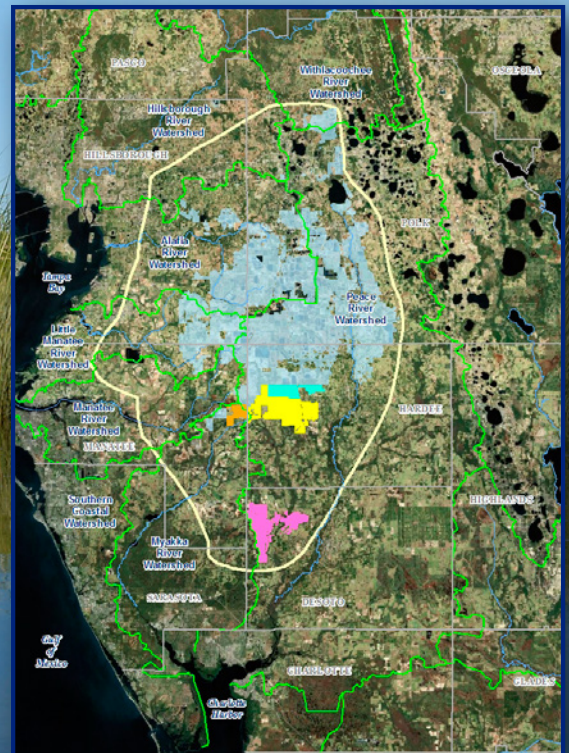


APPENDIX H

ECONOMIC ANALYSIS FOR THE FINAL AEIS ON PHOSPHATE MINING IN THE CFPD



Economic Analysis for the Final AEIS on Phosphate Mining in the CFPD

PREPARED FOR: U.S. Army Corps of Engineers, Jacksonville District
COPY TO: U.S. Environmental Protection Agency
Florida Department of Environmental Protection
PREPARED BY: CH2M HILL
DATE: Revised April 8, 2013
PROJECT NUMBER: 418237.07.01

1.0 Introduction

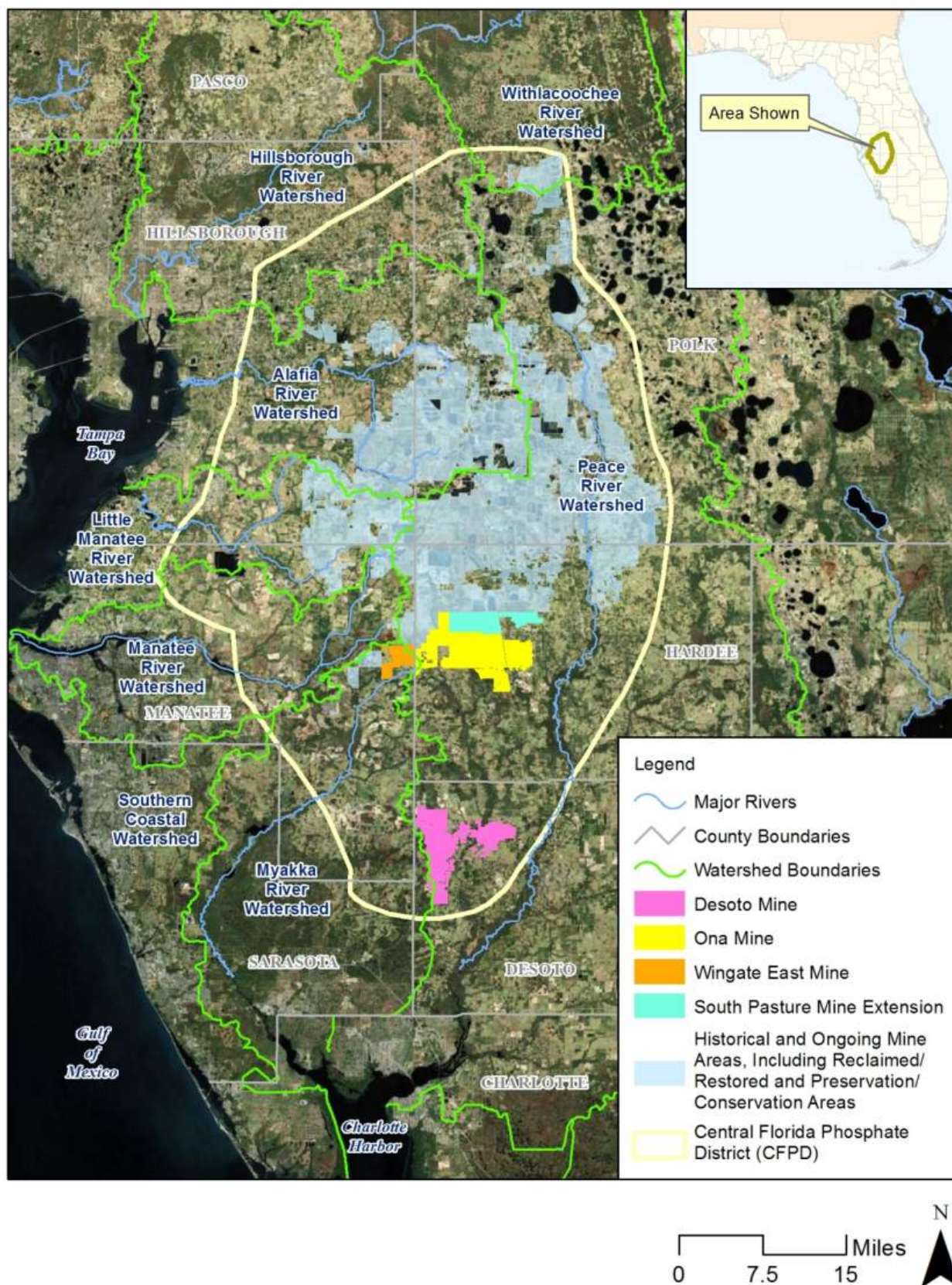
Mosaic Fertilizer, LLC, and CF Industries, Inc. (the Applicants) have applied for Clean Water Act Section 404 permits from the U.S. Army Corps of Engineers (USACE). The permits would authorize construction and operation of the Applicants' four preferred phosphate mine alternatives Desoto (Alternative 2), Ona (Alternative 3), Wingate East (Alternative 4), and South Pasture Mine Extension (Alternative 5) within an area known as the Central Florida Phosphate District (CFPD). The USACE is preparing an Areawide Environmental Impact Statement (AEIS) to evaluate the potential environmental consequences of federal authorization of these mines.

During the course of identifying alternatives to the Applicants' Preferred Alternatives, a number of other land areas that might be considered as alternative candidate sites to the Applicants' Alternatives were identified. These included two specifically named parcels, the Pine Level/Keys Tract (Alternative 6) and the Pioneer Tract (Alternative 7), which the Applicant (Mosaic) identified as mine projects likely to be pursued by the company within the reasonably foreseeable future. These offsite alternative projects were identified by Mosaic as potential extensions of the Desoto Mine and Ona Mine, respectively, and could be developed within the planning horizon being evaluated under this AEIS (approximately a 50-year window from the base year of 2010). If they were developed, their operational periods would overlap, in part, with those of some of the Applicants' Preferred Alternatives. On this basis, these alternatives were included as Reasonably Foreseeable Future Alternatives in the cumulative impacts evaluations for the Final AEIS. These alternatives were also included in the economic evaluations as standalone alternatives. However for these standalone analyses, the schedule for the alternatives was moved forward resulting in the entire operating period of these mines occurring within the 50-year study period.

The alternatives analysis screening process conducted (see Chapter 2) also identified two other offsite alternatives to the Applicants' Preferred Alternatives, referred to as Site A-2 (Alternative 8) in Hardee County, and Site W-2 (Alternative 9) in Manatee County. There was no information regarding prospective acquisitions for these offsite alternatives and while meeting the criteria as reasonable alternatives they are considered speculative and are not addressed under the economic evaluations summarized in this technical memorandum (TM). Figure 1 shows the AEIS study area and the locations of each of the Applicants' Preferred Alternatives. The Pine Level/Keys Tract is immediately to the west of the Desoto Mine site. The Pioneer Tract is south of the Ona Mine site. Collectively, the sites that are alternatives to the Applicants' Preferred Alternatives (Alternatives 6, 7, 8, and 9) are referred to as Offsite Alternatives and also are evaluated as stand-alone alternatives.

This TM documents the economic evaluation methodology applied, and presents the results of an analysis of the predicted change in level of economic activity in an eight-county region consisting of five counties in the CFPD and three adjoining counties. Direct economic impacts would be anticipated on the specific counties within which the Applicants' Preferred Alternatives would be located. Indirect and induced economic effects would occur to varying degrees on the surrounding counties. For this economic analysis, the area included in the evaluation encompassed each county in its entirety, not just the areas being mined or downstream from the mines. The direct impacts on the prospective host counties (Manatee, Hardee, and DeSoto Counties) were evaluated along with the indirect and induced effects on Polk, Hillsborough, Charlotte, Sarasota, and Lee Counties.

FIGURE 1
AEIS Study Area and Applicants' Preferred Mine Locations
Central Florida Phosphate District, Florida



The economic impacts considered in this evaluation include Employment, Labor Compensation, Value of Production or Output, and Value Added. Most of the direct impacts result from the mining and reclamation activities and changes in agricultural activities in the mine areas, as the land currently devoted to pasture, citrus, vegetables, and melons and other uses would be converted to mining and then returned to agricultural or other uses over the study period. Other direct impacts relate to revenues to local governments including severance taxes and ad valorem and tangible personal property taxes. These local government revenues are a redistribution of the direct income from mining, agricultural, and other land uses, and should not be viewed as additional income to the region beyond the total output or income figures presented. Indirect and induced impacts resulting from these direct income impacts are estimated using the economic modeling software Impact Analysis for Planning (IMPLAN) software (Minnesota IMPLAN Group, Inc. [MIG], 2012).

The purpose of these evaluations was to compare these economic metrics for a number of scenarios, including the following:

- No Action Alternative
- Alternatives 2 through 7—The effect on host counties of individual alternatives, referred to as the “Mining Alternatives” (as noted previously, Alternatives 8 and 9 are not considered further in this analysis)
- Mining Contribution to Cumulative Impacts—The areawide effects of permit approval of the individual mines plus the two reasonably foreseeable offsite alternatives

The impacts in this analysis were measured for 10-year increments over a 50-year period (2010 to 2060). This analysis projects the average annual level of activity over each 10-year period. The net present value of the change in the output of the alternatives over the 50-year period is then calculated. The analysis is focused solely on mining and beneficiation, not transport of the produced phosphate rock or subsequent rock processing or export of any manufactured phosphate products. Economic impacts outside the eight-county region are not included in this analysis.

The analysis presents a No Action Alternative that assumes that new mining permits would be denied, or modified to eliminate all discharges of dredged or fill material into Waters of the U.S. Existing mines are assumed to continue to operate until they reach the end of their rock production. Table 1 presents a summary of the existing mines in the CFPD, their currently projected schedule for completion of mining, and the county or counties within which each mine is located. Reclamation activities at these mines would continue for varied durations beyond the indicated mining periods.

TABLE 1
Existing CFPD Phosphate Mines
Central Florida Phosphate District, Florida

Mine	Mining Period	Counties
Four Corners	Present – 2019	Hillsborough, Manatee, Polk, and Hardee Counties
Hookers Prairie	Present – 2013	Polk County
South Fort Meade	Present – 2020	Hardee County
Wingate Creek	Present – 2013	Manatee County
Wingate Extension	2013-2018	Manatee County
South Pasture	Present – 2035	Hardee County

The Applicants formally have applied for permits from the USACE that would allow development of the four preferred new mine projects (two new mines [Desoto and Ona]) and two extensions of existing mines [South Pasture Mine Extension and Wingate East]). As noted previously, the additional reasonably foreseeable alternatives included in this economic evaluation (the Pine Level/Keys and Pioneer Mines) may also be considered

as extensions to two of the Applicants' Preferred Alternatives (Desoto Mine and Ona Mine, respectively). The mining periods for the Applicants' Preferred and reasonably foreseeable alternatives are shown in Table 2.

TABLE 2
Applicants' Preferred, Pine Level/Keys and Pioneer Alternatives
Central Florida Phosphate District, Florida

Alternative	Mining Period	Counties
Desoto	2021-2037	DeSoto County
Ona	2020-2050	Hardee County
Wingate East	2015-2051	Manatee County
South Pasture Mine Extension	2020-2032	Hardee County
Pine Level/Keys ¹	2035 - 2070	DeSoto and Manatee Counties
Pioneer ²	2048 - 2075	Hardee County

¹Schedule shown is schedule used for the cumulative impact analyses. For the individual mine analyses, the schedule for the Pine Level/Keys Tract was accelerated to begin in 2020.

²Schedule shown is schedule used for the cumulative impact analyses. For the individual mine analyses, the schedule for the Pioneer Tract was accelerated to begin in 2023.

Table 3 summarizes the projected schedule of mining of the current, Applicants' Preferred, and reasonably foreseeable future mines by 10-year increments beginning in 2010. The number of acres of land projected to be mined is approximately 90,905 acres over the 50-year study period.

TABLE 3
Acres Projected to be Mined per 10-Year Period (Total Acreage Mined per period)
Central Florida Phosphate District, Florida

Mine Name	TOTAL ACREAGE	2010-20	2020-30	2030-40	2040-50	2050-60	Total Mined
		Mined 1-10	Mined 10-20	Mined 20-30	Mined 30-40	Mined 40-50	
Hookers Prairie	14,641	954					954
Wingate Creek	3,062	448					448
Ona Mine	20,466		4,675	6,486	8,033	1,271	20,466
Desoto	17,290		8,364	5,612			13,976
Pine Level/Keys ¹	24,125			5,505	6,539	7,109	19,153
Pioneer ²	24,719					6,344	6,344
Four Corners	51,391	7,750					7,750
Wingate East	3,312		67	1,106	1,349	729	3,251
South Pasture	15,369	4,480	2,240	2,016			8,736
South Pasture Mine Extension	6,201		1,701	2,159			3,860
South Fort Meade	10,903	5,408					5,408
Wingate Extension	661	559					559
Totals	192,140	19,599	17,048	22,884	15,921	15,453	90,905

¹Schedule shown is schedule used for the cumulative impact analyses. For the individual mine analyses, the schedule for the Pine Level/Keys Tract was accelerated to begin in 2020.

²Schedule shown is schedule used for the cumulative impact analyses. For the individual mine analyses, the schedule for the Pioneer Tract was accelerated to begin in 2023.

The schedule for reclamation of the current, Applicants' Preferred, and the two reasonably foreseeable mines is presented in Table 4. Approximately 85 percent of the land projected to be mined within the planning horizon (through 2060) is also scheduled for reclamation in the study period.

TABLE 4
Acres Projected to be Reclaimed per 10-Year Period
Central Florida Phosphate District, Florida

County	Mine	2010-20	2020-30	2030-40	2040-50	2050-60	Total Reclaimed
		Reclaimed	Reclaimed	Reclaimed	Reclaimed	Reclaimed	
		1-10	10-20	20-30	30-40	40-50	
Polk County	Hookers Prairie	617	440				1,057
Manatee County	Wingate Creek	261	186				448
Hardee County	Ona		392	2,807	3,825	11,162	18,186
DeSoto County	Desoto		1,046	6,692	6,238	-	13,976
Manatee/DeSoto County	Pine Level/Keys ¹		-	2,202	2,615	2,844	7,661
Hardee County	Pioneer ²		-	-	-	2,538	2,538
Hillsborough, Manatee, Polk and Hardee	Four Corners	4,926	7,750				12,676
Manatee County	Wingate East		-	-	842	1,113	1,955
Hardee County	South Pasture		2,800	4,760	1,176		8,736
Hardee County	South Pasture Mine Extension		-	744	2,910	583	4,237
Hardee County	South Fort Meade		5,408				5,408
Manatee County	Wingate Extension		559				559
Total		5,804	18,583	17,205	17,607	18,239	77,437

¹Schedule shown is schedule used for the cumulative impact analyses. For the individual mine analyses, the schedule for the Pine Level/Keys Tract was accelerated to begin in 2020.

²Schedule shown is schedule used for the cumulative impact analyses. For the individual mine analyses, the schedule for the Pioneer Tract was accelerated to begin in 2023.

2.0 Economic Analysis Methodology

The economic analysis measures the level of economic activity in the 8-county region under the No Action and Mining Alternatives. The impacts of the mining and agricultural activities that would be undertaken on the respective mine sites are measured in terms of the following:

- **Output**—Total sales or value of goods and services produced. For the phosphate industry this would represent the value of the phosphate rock ready for shipment from the beneficiation plant.
- **Employment or jobs**—Annual average full and part time jobs. The number of jobs does include self employment. It should be noted that jobs are by place of work, not by where the employee resides. To the extent that employees reside in a different county than where they work, these jobs would be included in the county where they work.
- **Labor income or compensation**—Wages and salaries, and employer and employee contributions to social security. Labor compensation is by place of work.
- **Value added**—Value added is the value of output or production less the cost of labor, materials, and services etc. purchased from others used to produce that output. On a national scale, value added is also known as Gross Domestic Product (GDP). GDP is often cited as a measure of the size of the economy. For a region, value added may be also referred to as Gross Regional Product (GRP).
- **Local government revenues**—Revenues from ad-valorem taxes (including tangible personal property taxes), and severance tax revenues distributed to the counties. Note: these revenues are part of the total output or value of goods and services produced that are redistributed to the local government.

The total economic impacts consist of the following direct, indirect, and induced impacts:

- **Direct Impacts**—Refers to the change in the impact of a change in “final demand” on a given business or industry. In this case it refers to the change in value of phosphate production and agricultural production resulting from the permitting of the Applicants’ Preferred or reasonably foreseeable alternatives. Direct employment and labor compensation consists of employees of the mining operations and reclamation

activities, and their associated labor income, and agricultural employment and labor income associated with agricultural activities on the mine sites.

- **Indirect Impacts**—Refers to the employment, labor compensation, value added, and output generated by the purchase of goods and services by the directly impacted industries from local suppliers.
- **Induced Impacts**—Induced impacts result from changes in household expenditures, as employees of the directly or indirectly impacted businesses make expenditures for goods and services in the local economy.

Some of the direct impacts (jobs, labor compensation, and value added), as well as the indirect and induced impacts are estimated using IMPLAN software (MIG, 2012). The total impacts are the summation of the direct, indirect, and induced impacts. The net present value of the difference in output, value added, and labor compensation between the new Mining and No Action Alternatives is then calculated, to estimate the change in output, value added, and labor compensation associated with the new Mining Alternatives.

The following describes the calculation of the direct output or value of production, and local government revenue impacts. This is followed by a description of the calculation of the direct employment and labor compensation, and indirect and induced impacts using the IMPLAN software.

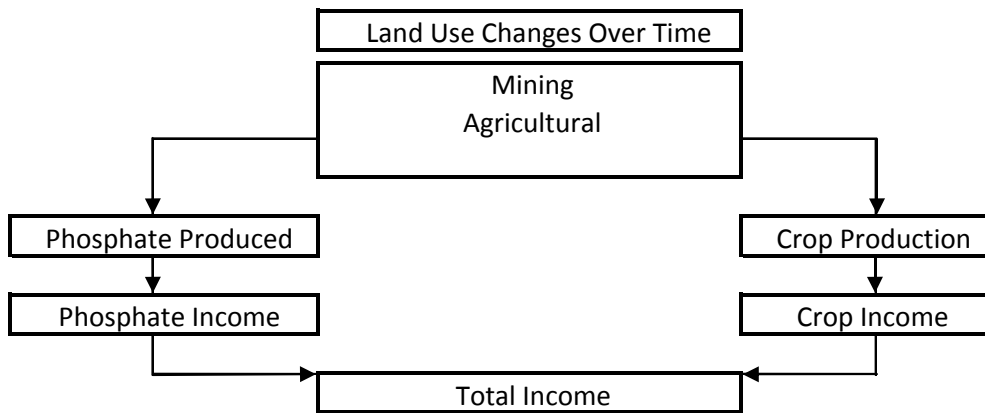
2.1 Direct Output or Value of Production

Figure 2 describes the calculation of the value of the direct output of mining and agricultural activities. The change in use of the land associated with each mine over the 50-year period is forecast based on the mine plans. The land mined in each 10-year period times the average phosphate produced per acre and the value of the phosphate per ton is the resulting value of phosphate produced in each 10-year period. The total value of production in the 10-year period is divided by 10 to derive the average annual production value. Similarly, the average annual inventory of land in each 10-year period devoted to agricultural activities (pasture, citrus, vegetable, and melons) times the estimated crop value per acre provides the average annual revenue from crop production in each 10-year forecast period.

FIGURE 2

Value of Output Calculation

Central Florida Phosphate District, Florida



2.2 Property Tax Revenues to Local Governments

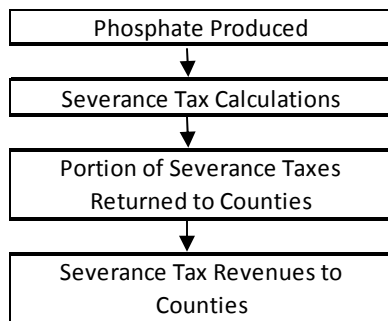
The changes in land uses over time are expected to change the assessed value of the land. As land moves from agricultural or other uses, to being mined, reclaimed, and then returned to pasture or other uses, the assessed value of the land is expected to change with its use. Parcel numbers for each of the Applicants' Preferred mines were provided by the Applicants. Assessed value information by land use was then collected from the tax assessor's offices in each county. The average assessed value per acre by land use was then used to develop projections of the impacts of the changes in mine land use over time. Property taxes on the investment in tangible personal property (mining plant and equipment) are also included in the estimated property taxes. This

investment was based on the estimated average investment in tangible personal property from the Applicants' permit applications.

2.3 Severance Tax Revenues to Local Governments

The State of Florida collects a tax on the phosphate mined. A portion of the revenue collected by the state is returned to the counties from which the phosphate was mined. The severance tax rate is applied to the phosphate produced to derive the state tax revenue estimate. The portion of this revenue returned to each county is calculated using the formula specified in the state law authorizing the collection of the severance tax. Figure 3 shows the relationships between the parameters used in this calculation.

FIGURE 3
Severance Tax Calculations
Central Florida Phosphate District, Florida



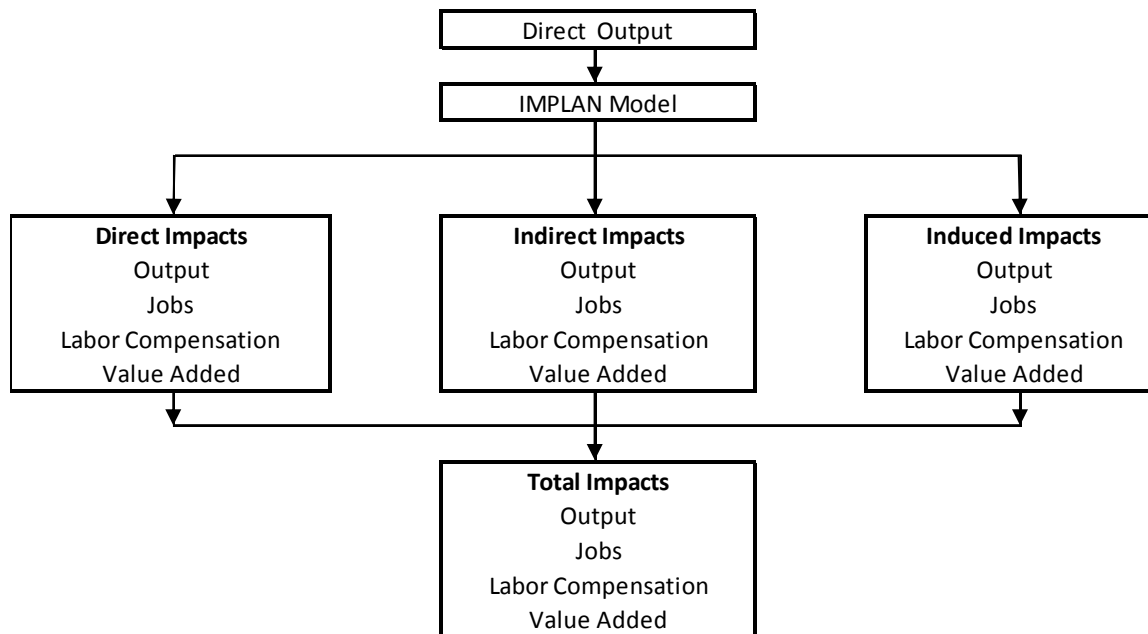
2.4 Estimation of Total Direct, Indirect, and Induced Impacts

Based on the estimated direct output discussed previously, the economic modeling software IMPLAN is used to estimate the direct employment, labor compensation, and value added impacts, as well as the indirect and induced economic impacts. IMPLAN calculates economic impacts in a transparent manner using known data sources for its calculations. For this analysis, data specific to the Applicants' Preferred Alternatives and beneficiation plants, and for the two reasonably foreseeable alternatives in the eight counties were used.

The IMPLAN data, derived from census and other government sources, approximates how, from where, and on what sectors (agriculture, services, manufacturing, etc.) of the economy industries spend money. IMPLAN also estimates the employment effects by industry. The IMPLAN analysis is based on national transactions in 2008.¹ Regional models are based on the national model, adjusted to reflect the industries in the specific region and their purchases and production. Figure 4 shows the relationships between the parameters used in these calculations. The sum of the direct, indirect, and induced output, jobs, labor compensation, and value added describes the total level of economic activity expected under the particular situation.

¹ This is the most recent version of the IMPLAN Model available at the time this analysis was being prepared.

FIGURE 4
Estimation of Total Direct, Indirect, and Induced Impacts
Central Florida Phosphate District, Florida



2.5 Net Impact of Mining Alternatives

The present value² of the total output, value added, and labor compensation under each alternative over the 50-year projection period was calculated for the Mining and No Action Alternatives. In addition, the average annual level of employment under each alternative over the 50-year period is also calculated. The difference between the present value or average annual employment under the Mining and No Action Alternatives is the estimated economic impact of the mining alternative on the region or county's economy.

3.0 Assumptions

The following assumptions were used in developing the economic impact evaluations presented in this TM:

3.1 Economic Impact Model Selection

Three recognized commercially available models were considered for estimating the direct employment, income, and indirect and induced impacts of the changes in direct impacts on the directly impacted counties and region:

- IMPLAN – Impact Analysis for Planning (MIG. 2012)
- RIMS II - Regional Industrial Multiplier System (U.S. Department of Commerce, 1997)
- REMI – (Regional Economic Models, Inc., undated)

RIMS II and IMPLAN are regional input/output models. Input/output (I/O) models are based on a cross-sectional analysis of the economy that describes the transactions between the various sectors of the economy (such as industry, trade, services). For each sector, the purchases of supplies, services, and other inputs and sales of products and services between sectors are mapped. Assuming that these transactional relationships do not change, the mapping allows the model to predict how a change in demand in one sector will affect the demands in other sectors. IMPLAN is based on national transactions, that are then regionalized based on regional purchase coefficients that estimate the portion of the total demand for a good or service in a region that is satisfied by local suppliers of that good or service. A region is defined in IMPLAN as a county or collection of counties.

² Present value is a tool for comparing alternatives with varying schedules of costs and/or revenues over time. Future costs and revenues are discounted to estimate their present worth.

REMI has been variously described in the literature as 1) a conjoined input/output model and behavior model, or 2) an input/output model integrated with an econometric and computable general equilibrium model. REMI incorporates forecast changes in the regional economy over time in a “control forecast,” and then runs a separate forecast that incorporates an anticipated change due to the policy decision, new industry, or other direct economic impact to the region. It uses the change from the control forecast to determine the change in output, employment, and income.

The I/O models used in each model are similar and provide estimates of revenues, value added, employment, and income; however, there are differences in how these statistics are estimated. Each relies on national statistics from some of the same sources to derive the relationships between the sectors, and then adjusts them to reflect the industries in the region being analyzed.

IMPLAN and RIMS are widely used by government agencies, universities, and others for similar types of economic impact analyses as is being conducted for this AEIS (Lynch, 2000). These models are relatively easy to use and transparent, with results that are replicable. In addition, their results can be explained relatively easily. One main difference between the IMPLAN and RIMS models for their use in this analysis is that the IMPLAN model allows the analyst to more readily and accurately make changes to the economy (i.e. add sectors that may not currently be in the region), whereas the multipliers for RIMS are based on existing sectors in the region. Thus, in DeSoto County, which does not currently have any phosphate mining, there would not be any RIMS multipliers for this sector. IMPLAN, in contrast, allows the user to modify the economy in the county to include this new sector.

REMI is a significantly more complex model that includes an I/O default option, but offers the advantage of being dynamic, that is the analysis can consider changes in the economy over time. This can also be a disadvantage as the accuracy of the projections will depend upon the underlying econometric model, which is not straightforward for the user to verify or for others to replicate. For situations where the model will be used for multiple years and can be refined over time, such as for analyzing tax policies by states, these disadvantages can be overcome. The complexity of the model and associated analysis also makes explaining any resulting analysis to decision makers and the public more challenging.

The focus of this economic analysis for the CFPD AEIS is on the direct, indirect, and induced impacts of a change in primarily just two sectors: phosphate mining and agriculture. IMPLAN was selected to perform the analysis for these reasons, as well as the study area’s location in a primarily rural economy, which is not changing rapidly. In addition, the Applicants’ Preferred Alternatives would contribute to sustaining employment in the industry and preventing the region from experiencing a significant contraction relative to the No Action Alternative. Thus, it is not anticipated that the alternatives will lead to changes in the economic structure of this region over time, a scenario that may benefit from a dynamic modeling approach.

3.2 General Assumptions

The basis for the economic analysis and supporting assumptions are detailed below.

- Insufficient information was available relating to the Offsite Alternatives A2 and W2 (Alternatives 8 and 9, respectively) to support their inclusion in the analysis.
- Reasonably Foreseeable Offsite Alternatives Pine Level/Keys and Pioneer Tracts (Alternatives 6 and 7, respectively) were included in the analyses, as alternatives to the Applicants’ Preferred Alternatives and in the areawide cumulative impacts analysis.
- For the cumulative impact analysis of the Pine Level/Keys Tract, this Reasonably Foreseeable Alternative is expected to begin mining in 2037. However, for the individual mine analyses, this alternative was accelerated to begin operations in 2023. This will result in this alternative completing mining activities within the study period.
- For the cumulative impact analysis of the Pioneer Tract, this Reasonably Foreseeable Alternative is expected to begin mining in 2048. However, for the individual mine analyses, this alternative was accelerated to begin operations in 2020. This will result in this alternative completing mining activities within the study period.

- The IMPLAN model and analysis is based on costs and revenues in 2008 dollars.¹
- Present value analysis assumes 2.0 percent real discount rate per Office of Management and Budget (OMB) 2012 Circular A-94 (OMB, 2012) for 30-year projects (the longest time period provided). This real discount rate is specified for cost effectiveness and related analyses where costs and revenues are specified in real dollars (without inflation).
- Reclamation is assumed to be complete within 8 years of the end of mining operations in accordance with Florida law.
- Mining operations are expected to be complete within 4 years of the end of rock production.
- For the Applicants' Preferred Alternatives, the post reclamation land use was based on a GIS analysis of the Applicants' post reclamation land use plans.
- For existing mines and the offsite mining alternatives, it was assumed that 40 percent of the reclaimed land would be used as pasture after reclamation³.
- Reclaimed land will be available for other uses within 8 years of completion of mining operations.
- Revenue per ton of phosphate: \$90.78 - average of 2009 to 2011 for United States imported natural calcium phosphates (U.S. Census Bureau, 2011b).
- The cost of constructing a new beneficiation plant, and associated infrastructure, was estimated at \$1 billion.
- Two new beneficiation plants would be constructed during the first decade of mining, one for the Desoto Mine and the other for the Ona Mine, which, as part of the cumulative impacts analysis, would also serve Pine Level/Keys Tract and Pioneer Tract if they were extensions to these mines.
- For the individual analyses of the Pioneer and Pine Level/Keys Tracts, it was assumed that beneficiation plants would be constructed in Decade 5 and Decade 3, respectively. Note: these individual analyses assume that the Ona and Desoto Mines are not permitted; therefore the beneficiation plants that would be constructed for those alternatives would not be available for use by the Pioneer and Pine Level/Keys Tracts, and new beneficiation plants would need to be constructed. Under the cumulative impact analyses, the Ona and Desoto Mine beneficiation plants would be constructed, and new beneficiation plants for the Pioneer and Pine Level/Keys Tracts would not be needed.
- The beneficiation plant to serve the Pine Level/Keys Tract would be constructed in DeSoto County, instead of the Manatee County mine location, since Manatee County has an ordinance prohibiting the operation of a beneficiation plant in the County.
- Four Corners Mine is equally distributed between Polk, Hardee, Manatee, and Hillsborough Counties.
- Current land uses on each mine site will continue until the area is mined.
- Estimates of the acreage mined on the Pine Level/Keys Tract differ between the Final AEIS and Mosaic's 10-K filing, because mine plans for this site have not been developed.
- Table 5 shows that the estimated phosphate produced per acre varies by mine. The value of 7,858 thousand tons per acre was used for existing mines based on the weighted average of permit applications for the Applicants' Preferred Alternatives.

³ It is recognized that this estimate probably underestimates the amount of post mining lands that will be devoted to agricultural pursuits. This has the effect of underestimating the value of post mining agricultural production.

TABLE 5
Phosphate Production in Tons per Acre
Central Florida Phosphate District, Florida

Mine	Tons per Acre Mined
Ona	9,139
Wingate East	11,726
Desoto	6,453
South Pasture Mine Extension	8,035
Existing Mines	7,858

- Reclamation cost of \$8,015 per acre was used from the Bureau of Mining and Minerals Regulation: Mandatory Reclamation Financial Assurance Requirement Memorandum of Agreement (MOA) Contouring Not Complete, for 2008 (Florida Department of Environmental Protection [FDEP], 2012g).
- The parcels comprising each of the Applicants' Preferred mine sites was provided by the Applicants.
- Average annual tax revenue per acre by land use was collected from the tax assessor's offices in each county for each of the Applicants' Preferred Alternatives.
- Property tax revenues were projected based on mining plan land use projections and average tax payments per acre by land use for each county.
- Property tax revenues for each of the Applicants' Preferred Alternatives and reasonably foreseeable alternative sites include tangible personal property tax revenues during the periods of mine operation. These revenues were based on the investment in plant and equipment from the mine permit applications for Ona, Desoto, and Wingate East mines and the applicable tax millage rates for each mine. The tangible personal property investment for the South Pasture Mine Extension was estimated based on it being approximately 30 percent of the size of the Ona Mine. The tangible personal property investment in the Pioneer Tract was estimated based on it providing a similar level of annual phosphate production as the Ona Mine. The tangible personal property investment in the Pine Level/Keys Tract was similarly based on it providing a similar level of annual production as the Desoto Mine. It was assumed that half of the investment in the Pine Level/Keys Tract would be in DeSoto County and half in Manatee County.
- State severance tax rate was assumed to be \$1.61 per short ton in the first decade, which is the rate collected by the state for the period from January 1 to June 30, 2012. The severance tax rate is assumed to increase to \$1.81 per short ton in the second through sixth decades.
- Hamilton County phosphate production was assumed to be 3.1 million short tons annually. This is the average annual level of production of the Swift Creek Mine, which is the only mine currently operating in Hamilton County. While Hamilton County is not in the study area, its phosphate production does affect the total severance tax revenues collected by the state, and a portion of these revenues is returned to the counties in the CFPD.
- The percentage of the state severance tax distributed to all of the counties with mining activities is assumed to be 12.8 percent, per legislation adopted in 2012 (Florida Senate, 2012). These revenues are shared among all of the phosphate producing counties in the CFPD and Hamilton County in proportion to their share of the state's total phosphate production.
- An additional 10 percent of the severance tax revenues collected by the state are distributed to phosphate producing counties identified as Rural Areas of Critical Economic Concern (RACEC). Counties included in this group include Hardee, DeSoto, and Hamilton. These revenues are shared among these counties in proportion to their respective shares of projected phosphate production.

- Each of the counties with the Applicants' Preferred or Offsite Alternative mine sites collects a local option sales tax or surcharge. The mining and agricultural activities are expected to generate additional sales tax revenues for the local government; however, these revenues have not been included in this analysis. This has the effect of underestimating the revenues to local governments, under both the No Action and Mining Alternatives.
- The amount of acreage on each of the Applicants' Preferred mine sites devoted to various agricultural and other uses was based on geographic information systems (GIS) analysis of the land use on each mine site.
- The initial distribution of agricultural lands on each existing and reasonably foreseeable mine site between pasture, vegetables and melons, citrus, and other land uses reflects the distribution of lands devoted to these crops in the county within which the mine lies from the county tax assessor's offices.
- The value of production of agricultural crops from the IMPLAN model for each crop was divided by the acres of land devoted to production of those crops in the county from a GIS analysis of the land use in each county, to derive the average revenue per acre. The average revenue per acre was applied to the forecast agricultural land use at each of the Applicants' Preferred Alternative mine sites, to project agricultural revenue for the land on these mine sites.
- The employment and employee compensation for each agricultural crop in each county from the IMPLAN model was divided by the acres of land devoted to production of those crops in the county, from a GIS analysis of the land use in each county, to derive the average employment per acre and average employee compensation per acre, that was applied to the forecast land use at each of the Applicants' Preferred mines, to project agricultural employment and agricultural employee compensation on these mine sites.
- Based on the hydrologic modeling and water quality impact analyses conducted for this AEIS, none of the Applicants' Preferred or reasonably foreseeable alternatives would result in substantive reductions in freshwater flows or water quality alterations that would adversely affect downstream estuarine biological communities. Therefore, the habitats/biota within the Charlotte Harbor estuary and the associated tourism and recreation they support would not be affected.
- USACE requires assessment of wetland quality and function in accordance with the Clean Water Act Section 404 program and the Compensatory Mitigation Rule for which it has the regulatory authority to implement. Evaluation of the economic value of wetlands, streams, and other natural habitats within the boundaries of the Applicants' Preferred mines or reasonably foreseeable mines is not necessary for assessment of potential impacts of mining on these natural systems. Relatively little tourism and recreation are associated with the natural systems on the Applicants' Preferred or reasonably foreseeable alternative sites.
- Section 404 of the Clean Water Act requires that when the USACE issues permits, a demonstration exist that steps have been taken to the extent practicable to:
 - Avoid impacts to wetlands and waters of the U.S.
 - Minimize potential impacts to wetlands
 - Provide compensation for any remaining unavoidable impacts

This requires that wetlands and streams be replaced, including any functions and values, which include economic and public values. This also includes any short or long term impacts. As such, this analysis does not expect any net impacts to these functions or values.

3.3 Results

The following presents the results of the economic analysis for the Applicants' Preferred and reasonably foreseeable alternatives on their host counties and an analysis of their cumulative impacts on the eight-county region. The results of each Mining Alternative are compared to the results for the No Action Alternative to derive the net impact of the mining alternatives on the overall level of economic activity in the county or region. The following analyses are presented in this TM:

- No Action Alternative
 - DeSoto County
 - Manatee County
 - Hardee County
 - DeSoto and Manatee Counties Combined
 - All Eight Counties Combined
- Individual Mining Alternatives
 - Desoto – DeSoto County
 - Ona – Hardee County
 - Wingate East – Manatee County
 - South Pasture Mine Extension – Hardee County
 - Pioneer – Hardee County
 - Pine Level/Keys – Manatee and DeSoto Counties⁴
- Cumulative Impact Alternatives
 - Desoto, Wingate East, and Pine Level/Keys Alternatives – DeSoto and Manatee Counties
 - Ona, South Pasture Mine Extension, and Pioneer Alternatives - Hardee County
 - All Existing, Applicants' Preferred, and reasonably foreseeable Alternatives – 8-county Region

3.4 No Action Alternative

The No Action Alternative analysis anticipates that the existing mines will continue to operate until the end of mining operations. Reclamation will continue beyond completion of mining operations at these existing mines. Other assumptions regarding the No Action Alternative are defined in Chapter 2.

3.4.1 DeSoto County

The 10 year total direct output and local government revenue impacts for each decade in the 50-year forecast period under the No Action Alternative for DeSoto County are presented in Table 6. There are no existing mines in DeSoto County, so the No Action Alternative does not show any mining output or severance taxes. The No Action Alternative includes forecast agricultural activities on the Desoto Mine site, assuming that this Applicants' Preferred mine is not permitted. Total agricultural output on the Desoto Mine site is projected to amount to \$3.3 million in each decade. Local governments receive revenues from property taxes and the State of Florida distributes a portion of the severance tax revenues that it collects from the mines to the counties with operating mines. The property tax paid by the mines is projected to remain constant throughout the forecast period, as there is no projected change in land use during this period. The assessed property values and property tax revenues generated by the mine properties actually will fluctuate with the use of the land and as tax rates may change over time. Insufficient information was available to allow the analyses to account for such changes with sufficient reliability for inclusion in this analysis.

The projected property tax revenues of \$10.0 million (Table 6) for each decade are based on an analysis of the property taxes being paid by the individual parcels comprising the Desoto Mine site. The list of parcels comprising the mine site was provided by the Applicant, and the annual property tax payments for those parcels were obtained from the county tax assessor records. Attachment A presents the average annual employment for each 10-year period, and 10 year totals for direct, indirect, induced, labor income, value added, and output metrics by decade for the No Action Alternative for DeSoto County. Attachment A also presents the calculation of the present value of the labor income, value added, and output impacts over the 50-year forecast period.

⁴ Desoto Mine beneficiation plant located in DesotoDesoto County will be used for Pine Level/Keys Mine if both mines are developed.

TABLE 6
DeSoto County No Action Alternative Forecast Direct Impacts by Decade⁵
Central Florida Phosphate District, Florida

	Years 1-10	Years 11-20	Years 21-30	Years 31-40	Years 41-50
Income					
Income/Revenue attributed to Mining	\$0	\$0	\$0	\$0	\$0
Income/Revenue attributed to Agriculture	\$3,300,000	\$3,300,000	\$3,300,000	\$3,300,000	\$3,300,000
Total	\$3,300,000	\$3,300,000	\$3,300,000	\$3,300,000	\$3,300,000
Local Government Revenues					
Property Taxes	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000
Severance Taxes	\$0	\$0	\$0	\$0	\$0
Total	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000	\$10,000,000

Note: Figures are totals for each 10-year period.

3.4.2 Manatee County

The 10 year total direct output and local government revenue impacts for each decade in the 50-year forecast period under the No Action Alternative for Manatee County is presented in Table 7. The No Action Alternative includes forecast mining activities associated with the existing mines in Manatee County: Wingate Creek, Wingate Extension, and a portion of the Four Corners Mine, agricultural activities on these existing mine sites, and on the Wingate East mine site and Pine Level/Keys offsite mine site, assuming that these Applicants' Preferred and reasonably foreseeable mines are not permitted. The data show that the existing mines will be exhausted in the first decade of the analysis. Agricultural output declines to approximately 93 percent of its first decade level of output in the second and subsequent decades. The average annual employment in each 10 year period and 10 year totals for direct, indirect, induced, labor income, value added, and output metrics by decade for the No Action Alternative for Manatee County are presented in Attachment A. It also presents the calculation of the present value of the labor income, value added, and output impacts of the No Action Alternative for Manatee County over the 50-year forecast period.

TABLE 7
Manatee County No Action Alternative Forecast Direct Impacts by Decade
Central Florida Phosphate District, Florida

	Years 1-10	Years 11-20	Years 21-30	Years 31-40	Years 41-50
Income					
Income/Revenue attributed to Mining	\$2,454,100,000	\$0	\$0	\$0	\$0
Income/Revenue attributed to Agriculture	\$22,300,000	\$20,800,000	\$20,800,000	\$20,800,000	\$20,800,000
Total	\$2,476,400,000	\$20,800,000	\$20,800,000	\$20,800,000	\$20,800,000
Local Government Revenues					
Property Taxes	\$15,600,000	\$14,200,000	\$14,600,000	\$14,700,000	\$14,700,000
Severance Taxes	\$5,600,000	\$0	\$0	\$0	\$0
Total	\$21,200,000	\$14,200,000	\$14,600,000	\$14,700,000	\$14,700,000

Note: Figures are totals for each 10-year period.

⁵ In the Desoto Mine permit application, annual property tax revenues paid to the county for this property were estimated to be \$13 million annually.

3.4.3 Hardee County

Table 8 presents the 10 year total direct output for each decade in the 50-year forecast period under the No Action Alternative for Hardee County. The No Action Alternative includes forecast mining activities associated with the existing mines in Hardee County (South Pasture, South Fort Meade, and a quarter of the Four Corners Mine), agricultural activities on these existing mine sites, and on the Applicants' Preferred Ona Mine and South Pasture Mine Extension sites, and reasonably foreseeable Pioneer Mine site, assuming that these Applicants' Preferred and/or reasonably foreseeable alternatives are not permitted. The data show that total income is projected to decline by 80 percent between the first and second decades. The vast majority of this reduction in output is in mining. Agricultural output is projected to decline by 18 percent from the first to the fourth decades, before stabilizing in the following decade. Property tax accrual to the county was estimated by multiplying the estimated tax revenue per acre by land use by the acres of land devoted to each land use in each decade and multiplying by 10 to derive the total property tax revenue by decade. Attachment A presents the average annual employment by decade, and direct, indirect, and induced labor income, value added, and output metrics by decade for the No Action Alternative for Hardee County, and the calculation of the present value of the labor income, value added, and output impacts of the No Action Alternative for Hardee County over the 50-year forecast period.

Table 8 also presents the County's projected property tax revenues on the Ona and South Pasture Mine Extension, and Pioneer Mine sites, and the projected portion of the state's severance tax revenues distributed to Hardee County for the existing mines. The No Action Alternative assumes that the Ona and South Pasture Mine Extension Alternatives and reasonably foreseeable Pioneer Alternative are not permitted, so there would not be any severance tax revenues associated with these mines.

TABLE 8
Hardee County No Action Alternative Forecast Direct Impacts by Decade
Central Florida Phosphate District, Florida

	Years 1-10	Years 11-20	Years 21-30	Years 31-40	Years 41-50
Income					
Income/Revenue attributed to Mining	\$8,508,400,000	\$1,634,000,000	\$1,470,600,000	\$0	\$0
Income/Revenue attributed to Agriculture	\$47,300,000	\$41,200,000	\$39,700,000	\$38,900,000	\$38,900,000
Total	\$8,555,700,000	\$1,675,200,000	\$1,510,300,000	\$38,900,000	\$38,900,000
Local Government Revenues					
Property Taxes	\$39,400,000	\$32,100,000	\$32,600,000	\$31,900,000	\$32,100,000
Severance Taxes	\$34,400,000	\$7,400,000	\$6,700,000	\$0	\$0
Total	\$73,800,000	\$39,500,000	\$39,300,000	\$31,900,000	\$32,100,000

Note: Figures are totals for each 10-year period.

3.4.4 DeSoto and Manatee Counties Combined

Table 9 summarizes the direct output and local government revenue impacts of the No Action Alternative for DeSoto and Manatee Counties combined. These counties are being combined for the areawide analysis of the Desoto, Wingate East, and Pine Level/Keys Alternatives, as their operations are expected to have direct impacts on both Counties. The Pine Level/Keys Alternative, which will be located in Manatee County, is considered for this analysis as an extension of the Desoto Alternative to capture the No Action impacts that can be compared for cumulative impact analysis. This site is located in DeSoto County. The beneficiation plant associated with the Desoto Alternative, will be located in DeSoto County, and is expected to also be used for the Pine Level/Keys Alternative. Thus the output, employment, and other direct impacts of the Pine Level/Keys Mine are expected to accrue to both counties.

The No Action Alternative includes forecast mining activities associated with the existing mines in Manatee County: Wingate Creek, Wingate Extension, and a portion of Four Corners Mine, agricultural activities on these

existing mine sites, and on the Desoto, Wingate East, and Pine Level/Keys Alternatives mine sites, assuming that the Applicants' Preferred and reasonably foreseeable alternatives are not permitted. Total agricultural output is projected to amount to \$25.6 million in the first decade, and decline to \$24.1 million in the subsequent decades. Annual property tax revenues generated from the mine sites are expected to amount to \$25.6 million in the first decade and decline somewhat to about \$24.2 million throughout the rest of the forecast period. The average annual employment by decade and 10 year totals for direct, indirect, induced and labor income, value added, and output metrics by decade for the No Action Alternative for DeSoto and Manatee Counties are presented in Attachment A. It also presents the calculation of the present value of the labor income, value added, and output impacts of the No Action Alternative for DeSoto and Manatee Counties over the 50-year forecast period.

TABLE 9

DeSoto and Manatee Counties Combined No Action Alternative Forecast Direct Impacts by Decade
Central Florida Phosphate District, Florida

	Years 1-10	Years 11-20	Years 21-30	Years 31-40	Years 41-50
Income					
Income/Revenue attributed to Mining	\$2,454,100,000	\$0	\$0	\$0	\$0
Income/Revenue attributed to Agriculture	\$25,600,000	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000
Total	\$2,479,700,000	\$24,100,000	\$24,100,000	\$24,100,000	\$24,100,000
Local Government Revenues					
Property Taxes	\$25,600,000	\$24,200,000	\$24,500,000	\$24,500,000	\$24,500,000
Severance Taxes	\$5,600,000	\$0	\$0	\$0	\$0
Total	\$31,200,000	\$24,200,000	\$24,500,000	\$24,500,000	\$24,500,000

Note: Figures are totals for each 10-year period.

3.4.5 Areawide Analysis - All 8 Counties Combined

The projected combined 10 year total direct impacts of the No Action Alternative by 10-year period for the 8-county region are presented in Table 10. The data reflect that most of the existing mines will reach the end of rock production within the first 10 years of the analysis, with South Pasture Mine continuing to produce rock until the third decade. As a result, income from mining activities decline dramatically in the second decade from \$14.4 billion in the first decade to \$1.6 billion in the second decade, and \$1.5 billion in the third decade. There is no direct mining income in the fourth decade and beyond, as no additional rock production are forecast for the CFPD under the No Action Alternative. The level of agricultural activity on the mine sites also declines until the 4th decade, as some of the land on the existing mine sites that are currently used for agriculture are mined. The level of agricultural activity then stabilizes in the fourth decade and remains at about this level in the fifth decade. The average annual employment by decade and 10 year totals for direct, indirect, induced and, labor income, value added, and output metrics by decade for the No Action Alternative for the 8-county region combined, and the calculation of the present value of the labor income, value added, and output impacts of the No Action Alternative for these counties over the 50-year forecast period are presented in Attachment A.

Local governments receive revenues from ad valorem and tangible personal property taxes and the State of Florida distributes a portion of the severance tax revenues that it collects from the mines to the contributing counties. Property tax revenues and estimated severance tax revenues the applicable counties would be predicted to receive that were used in this cumulative No Action Alternative were the totals from the individual county analyses. Severance tax revenues distributed to the counties are expected to decline along with the level of mining activity in the region. Under the No Action Alternative, the severance tax revenues are forecast to decline from \$57.9 million in the first decade to nothing by the fourth decade.

TABLE 10
No Action Alternative Areawide Analysis Projected Direct Impacts by Decade
Central Florida Phosphate District, Florida

	Years 1-10	Years 11-20	Years 21-30	Years 31-40	Years 41-50
Income					
Income/Revenue attributed to Mining	\$14,407,100,000	\$1,634,000,000	\$1,470,600,000	\$0	\$0
Income/Revenue attributed to Agriculture	\$92,600,000	\$82,900,000	\$81,500,000	\$80,800,000	\$80,800,000
Total	\$14,499,700,000	\$1,716,900,000	\$1,552,100,000	\$80,800,000	\$80,800,000
Local Government Revenues					
Property Taxes	\$62,800,000	\$53,300,000	\$54,400,000	\$53,600,000	\$53,700,000
Severance Taxes	\$57,900,000	\$7,400,000	\$6,700,000	\$0	\$0
Total	\$120,700,000	\$60,700,000	\$61,100,000	\$53,600,000	\$53,700,000

Note: Figures are totals for each 10-year period.

3.4.6 Upland Only

Although not analyzed quantitatively, it is reasonable to expect that the No Action Alternative – Upland Only scenario would have some of the economic benefits of the Action Alternatives. As the area that would be mined is unknown, it would be speculative to try and determine the significance of the impacts.

3.5 Economic Impacts of Applicants' Preferred and Reasonably Foreseeable Alternatives

The following sections present the estimated economic impacts for the individual Applicants' Preferred Alternatives and the reasonably foreseeable alternatives. It should be noted the impacts for the individual counties will be less than the total areawide impacts (described in the cumulative impacts section), because of the indirect and induced impacts from these mines on the other counties in the region that are not captured in the individual county impact analyses.

3.5.1 Desoto Alternative

Table 11 presents the direct income and local government revenue over the 50-year forecast period assuming that a permit to construct and operate the Desoto Alternative is issued. These direct impacts consist of forecast mining activities on the Desoto Alternative, construction of a beneficiation plant, and agricultural activities on the mine site. The data show that mining operations would occur in the second and third decades (between 2020 and 2040).

TABLE 11
DeSoto County - Desoto Alternative Forecast Direct Impacts by Decade
Central Florida Phosphate District, Florida

	Years 1-10 ¹	Years 11-20	Years 21-30	Years 31-40	Years 41-50
Income					
Income/Revenue attributed to Mining	\$0	\$4,902,100,000	\$3,812,800,000	\$0	\$0
Beneficiation Plant Construction	\$1,000,000,000				
Income/Revenue attributed to Agriculture	\$3,300,000	\$2,200,000	\$1,000,000	\$1,200,000	\$1,400,000
Total	\$1,003,300,000	\$4,904,300,000	\$3,813,800,000	\$1,200,000	\$1,400,000
Local Government Revenues					
Property Taxes	\$16,700,000	\$40,600,000	\$32,700,000	\$9,000,000	\$9,900,000
Severance Taxes	\$0	\$22,300,000	\$17,300,000	\$0	\$0
Total	\$16,700,000	\$62,900,000	\$50,000,000	\$9,000,000	\$9,900,000

Note: Figures are totals for each 10-year period.

¹Includes \$1 billion for construction of a beneficiation plant.

The net economic effects of permitting the Desoto Alternative on DeSoto County are summarized in Table 12. The net present value of the difference in output, and employee compensation or labor income, in DeSoto County between the Desoto Alternative and No Action Alternative amounts to \$7.9 billion and \$2.3 billion, respectively. The Desoto Alternative is forecast to increase employment in DeSoto County by an average of 717 jobs over the 50-year study period. The 10 year totals for direct, indirect, induced, and total impacts by decade for DeSoto County, for the Desoto Alternative and the calculation of the present value of the impacts of the Mining Alternatives are presented in Attachment B.

TABLE 12
Net Impacts With Desoto Alternative as Compared to No Action Alternative on DeSoto County
Central Florida Phosphate District, Florida

	No Action Alternative	Desoto Alternative	Difference
Average Annual Employment	7	724	717
Present Value Labor Income	\$4,500,000	\$2,333,800,000	\$2,329,300,000
Present Value - Value Added	\$16,000,000	\$4,705,000,000	\$4,689,000,000
Present Value Output	\$27,400,000	\$7,954,700,000	\$7,927,300,000

3.5.2 Ona Alternative

Table 13 presents the direct output and local government revenue impacts over the 50-year forecast period assuming that a permit to construct and operate the Ona Alternative is issued. These direct impacts include forecast mining activities on the existing mines operating in the county and the Applicants' Preferred Ona Alternative, construction of a beneficiation plant, and agricultural activities on the existing and Applicants' Preferred and reasonably foreseeable alternative sites (including agricultural activities on the South Pasture Mine Extension Alternative and Pioneer Alternative). This analysis assumes that permits for constructing and operating the South Pasture Mine Extension Alternative and Pioneer Alternative are not issued (the impacts of issuing a permit for the South Pasture Mine Extension Alternative, issuing a permit for the Pioneer tract and the impacts on Hardee County of issuing permits for construction and operation of three of the Applicants' Preferred alternatives [Ona, South Pasture Mine Extension, and Pioneer Tract] are presented later in this analysis). The data show that with only the Ona Alternative approved, mining activities continue in the county through the fifth decade. 10 year totals for income from mining is forecast to decline from \$8.5 billion in the first decade to \$7.1 billion in the second decade, decline to \$6.9 billion in the third decade and \$5.4 billion in the fourth decade, before falling to

\$545 million in the fifth decade. Agricultural revenues are projected to decline each decade from \$47.3 million in the first decade to \$20 million in the fifth decade.

TABLE 13
Hardee County With Ona Alternative Forecast Direct Impacts by Decade
Central Florida Phosphate District, Florida

	Years 1-10 ¹	Years 11-20	Years 21-30	Years 31-40	Years 41-50
Income					
Income/Revenue attributed to Mining	\$8,508,400,000	\$7,080,800,000	\$6,917,400,000	\$5,446,800,000	\$544,700,000
Beneficiation Plant Construction	\$1,000,000,000				
Income/Revenue attributed to Agriculture	\$47,300,000	\$38,500,000	\$31,200,000	\$23,600,000	\$20,000,000
Total	\$9,555,700,000	\$7,119,300,000	\$6,948,600,000	\$5,470,400,000	\$564,700,000
Local Government Revenues					
Property Taxes	\$39,400,000	\$67,500,000	\$65,200,000	\$60,900,000	\$25,600,000
Severance Taxes	\$34,400,000	\$32,200,000	\$31,400,000	\$24,800,000	\$2,500,000
Total	\$73,800,000	\$99,700,000	\$96,600,000	\$85,700,000	\$28,100,000

Note: Figures are totals for each 10-year period.

¹Includes \$1 billion for construction of a beneficiation plant.

The net effects of permitting the Ona Alternative on Hardee County are summarized in Table 14. The net present value of the difference in income and employee compensation in Hardee County between the Ona Alternative and No Action Alternative amounts to \$12.9 billion and \$3.7 billion, respectively. The Ona Alternative is forecast to increase employment in Hardee County by an average of 1,233 jobs over the 50-year study period, as compared to the No Action Alternative. It should be noted that the additional jobs and output presented in Table 14 represent jobs and output that would not be lost as compared to the No Action Alternative for the county, not an increase in jobs compared to existing employment and output. The 10 year totals for direct, indirect, induced, and total impacts by decade for Hardee County, for the Ona Alternative are presented in Attachment B. The calculation of the present value of the impacts of the Mining Alternatives is also presented in Attachment B.

TABLE 14
Net Impacts With Ona Alternative as Compared to No Action Alternative on Hardee County
Central Florida Phosphate District, Florida

	No Action	With Mine	Difference
Average Annual Employment	840	2,073	1,233
Present Value Labor Income	\$3,296,500,000	\$7,039,700,000	\$3,743,200,000
Present Value - Value Added	\$6,798,600,000	\$14,457,600,000	\$7,659,000,000
Present Value Output	\$11,459,900,000	\$24,359,100,000	\$12,899,200,000

3.5.3 Wingate East Alternative

Table 15 presents the direct output and local government property tax and severance tax revenue impacts over the 50-year forecast period assuming that a permit to construct and operate the Wingate East Alternative is issued. These direct impacts include forecast mining activities on the existing mines operating in the county (Wingate Creek and Wingate Extension) and the Applicants' Preferred Wingate East Alternative. The analysis also includes the agricultural income on the Pine Level/Keys Tract, assuming that a permit to operate this mine is not issued. The impact of issuing a permit to operate the potential Pine Level/Keys Alternative is presented later in this analysis. The data show rock mining production into the fifth decade.

TABLE 15
Manatee County With Wingate East Alternative Forecast Direct Impacts by Decade
Central Florida Phosphate District, Florida

	Years 1-10	Years 11-20	Years 21-30	Years 31-40	Years 41-50
Income					
Income/Revenue attributed to Mining	\$2,573,200,000	\$1,191,000,000	\$1,191,000,000	\$1,191,000,000	\$238,200,000
Income/Revenue attributed to Agriculture	\$38,900,000	\$37,300,000	\$34,100,000	\$27,900,000	\$22,100,000
Total	\$2,612,100,000	\$1,228,300,000	\$1,225,100,000	\$1,218,900,000	\$260,300,000
Local Government Revenues					
Property Taxes	\$16,400,000	\$15,700,000	\$16,000,000	\$15,300,000	\$13,300,000
Severance Taxes	\$5,800,000	\$3,000,000	\$3,000,000	\$3,000,000	\$600,000
Total	\$22,200,000	\$18,700,000	\$19,000,000	\$18,300,000	\$13,900,000

Note: Figures are totals for each 10-year period.

The net impacts of permitting the Wingate East Alternative on Manatee County are summarized in Table 16. The net present value of the difference in income and employee compensation in Manatee County between the Wingate East Alternative and No Action Alternatives amounts to \$2.9 billion and \$867 million, respectively. The with Wingate East Alternative is forecast to increase employment in Manatee County by an average of 332 jobs over the 50-year study period, as compared to the No Action Alternative. As the No Action Alternative is expected to result in a significant decline in employment and output in the county, the Wingate East Mine Alternative is expected to save about 332 jobs that would otherwise be lost, not additional jobs when compared to the existing levels of economic activity in the county. Attachment B presents the 10 year totals for direct, indirect, induced, and total impacts by decade for Manatee County, for the Wingate East Alternative. The calculation of the present value of the Wingate East Alternative on Manatee County is also presented in Attachment B.

TABLE 16
Net Impacts With Wingate East Alternative as Compared to No Action Alternative on Manatee County
Central Florida Phosphate District, Florida

	No Action	With Mine	Difference
Average Annual Employment	233	565	332
Present Value Labor Income	\$809,100,000	\$1,675,800,000	\$866,700,000
Present Value - Value Added	\$1,605,600,000	\$3,322,800,000	\$1,717,200,000
Present Value Output	\$2,741,500,000	\$5,674,700,000	\$2,933,200,000

3.5.4 South Pasture Mine Extension Alternative

Like the Ona Alternative, the South Pasture Mine Extension Alternative is in Hardee County. As such, the No Action Alternative analysis for Hardee County, presented in Table 8, is also the No Action Alternative for evaluating the impacts of the South Pasture Mine Extension Alternative.

Table 17 presents the 10 year total direct output, property tax revenue, and severance tax revenue distributed to the county by decade over the 50-year forecast period assuming that a permit to construct and operate the South Pasture Mine Extension Alternative is issued. These direct impacts include forecast mining activities on the existing mines operating in the county and the South Pasture Mine Extension Alternative, and agricultural activities on the existing and Applicants' Preferred and reasonably foreseeable mine sites (including agricultural activities on the Ona Alternative). This analysis assumes that permits for constructing and operating the Ona Alternative and Pioneer Alternative are not issued (the impacts of issuing a permit for the Ona Alternative was previously described, the impacts of issuing a permit for the Pioneer Tract is described later in this analysis, and the impacts on Hardee County of issuing permits for construction and operation of the Ona, South Pasture Mine

Extension, and Pioneer Alternatives are presented in the cumulative impacts section of this analysis). The data show that the South Pasture Mine Extension Alternative is expected to provide mining output until part way through the third decade.

TABLE 17
Hardee County - South Pasture Mine Extension Alternative Forecast Direct Impacts by Decade
Central Florida Phosphate District, Florida

	Years 1-10	Years 11-20	Years 21-30	Years 31-40	Years 41-50
Income					
Income/Revenue attributed to Mining	\$8,508,400,000	\$3,268,100,000	\$1,960,800,000	\$0	\$0
Income/Revenue attributed to Agriculture	\$47,300,000	\$39,900,000	\$35,800,000	\$33,700,000	\$34,000,000
Total	\$8,555,700,000	\$3,308,000,000	\$1,996,600,000	\$33,700,000	\$34,000,000
Local Government Revenues					
Property Taxes	\$39,400,000	\$42,700,000	\$34,800,000	\$29,900,000	\$30,600,000
Severance Taxes	\$34,400,000	\$14,900,000	\$8,900,000	\$0	\$0
Total	\$73,800,000	\$57,600,000	\$43,700,000	\$29,900,000	\$30,600,000

Note: Figures are totals for each 10-year period.

As shown in Table 18, the With South Pasture Mine Extension Alternative, as compared to the Hardee County No Action Alternative, would increase average employment in the county over the 50-year period by 145 jobs. The net present value of the total income in the county would increase by \$1.7 billion and labor compensation by \$504 million, as compared to the No Action Alternative. Attachment B presents the calculation of the 10-year total impacts by decade for the South Pasture Mine Extension Alternative, and the calculation on the present value of the South Pasture Mine Extension Alternative.

TABLE 18
Net Impacts With South Pasture Mine Extension Alternative as Compared to No Action Alternative on Hardee County
Central Florida Phosphate District, Florida

	No Action	With Mine	Difference
Average Annual Employment	840	985	145
Present Value Labor Income	\$3,296,500,000	\$3,800,600,000	\$504,100,000
Present Value - Value Added	\$6,798,600,000	\$7,828,300,000	\$1,029,700,000
Present Value Output	\$11,459,900,000	\$13,193,700,000	\$1,733,800,000

3.5.5 Pioneer Alternative – Hardee County

Table 19 presents the 10 year total direct output by decade over the 50-year forecast period assuming that a permit to construct and operate the Pioneer Alternative is issued. These direct impacts include forecast mining activities on the existing mines operating in Hardee County and the Pioneer Alternative, and agricultural activities on the existing and Applicants' Preferred and offsite alternatives (including agricultural activities on the Ona and South Pasture Mine Extension Alternatives). This analysis assumes that permits for constructing and operating the Ona and South Pasture Mine Extension Alternatives are not issued (the impacts of issuing a permit for the Ona Alternative and South Pasture Mine Extension Alternative was discussed previously, and the impacts on Hardee County of issuing permits for construction and operation of three alternatives: Ona, South Pasture Mine Extension, and Pioneer are presented in the cumulative impacts section of this analysis). This analysis assumes that the schedule for the Pioneer Tract will be moved up to begin in 2023. The data show that the Pioneer Alternative is expected to provide mining output beginning in the second decade of the analysis.

A beneficiation plant would be constructed in the second decade under this analysis as this analysis assumes that a permit to construct and operate the Ona Alternative is not issued, thus the beneficiation plant that would be

constructed to serve the Ona Mine would not have been constructed, and thus would not be available to also process phosphate rock for the Pioneer Alternative.

The Pioneer Alternative has an estimated life of 27 years. By starting the mine operations in 2023, rock production would be complete by 2050.

TABLE 19
Forecast Direct Impacts by Decade on Hardee County With Pioneer Alternative
Central Florida Phosphate District, Florida

	Years 1-10	Years 11-20	Years 21-30	Years 31-40	Years 41-50
Income					
Income/Revenue attributed to Mining	\$8,508,400,000	\$6,308,800,000	\$8,148,900,000	\$6,678,300,000	\$0
Beneficiation Plant Construction	\$0	\$1,000,000,000	\$0	\$0	\$0
Income/Revenue attributed to Agriculture	\$47,300,000	\$37,800,000	\$28,700,000	\$19,600,000	\$16,100,000
Total	\$8,555,700,000	\$7,346,600,000	\$8,177,600,000	\$6,697,900,000	\$16,100,000
Local Government Revenues					
Property Taxes	\$39,400,000	\$32,800,000	\$30,200,000	\$25,300,000	\$55,700,000
Severance Taxes	\$34,400,000	\$28,700,000	\$37,000,000	\$30,400,000	\$0
Total	\$73,800,000	\$61,500,000	\$67,200,000	\$55,700,000	\$55,700,000

Note: Figures are totals for each 10-year period.

As shown in Table 20, the With Pioneer Alternative, as compared to the Hardee County No Action Alternative, would increase average employment in the county over the 50-year period by an average of 1,310 jobs. The net present value of the total income in the county would increase by \$13.4 billion and labor compensation by \$3.9 billion, as compared to the No Action Alternative. Attachment B presents the calculation of the 10-year total impacts by decade for the Pioneer Mine Alternative, and the calculation on the present value of the Pioneer Mine Alternative.

TABLE 20
Net Impacts on Hardee County With Pioneer Alternative
Central Florida Phosphate District, Florida

	No Action	With Mines	Difference
Average Annual Employment	840	2,151	1,310
Present Value Labor Income	\$3,296,500,000	\$7,174,600,000	\$3,878,100,000
Present Value - Value Added	\$6,798,600,000	\$14,731,700,000	\$7,933,100,000
Present Value Output	\$11,459,900,000	\$24,821,200,000	\$13,361,300,000

3.5.6 Pine Level/Keys Alternative – Manatee and DeSoto Counties

Table 21 presents the direct economic impact of the potential Pine Level/Keys Alternative on DeSoto and Manatee Counties. This mine would be expected to have direct impacts on both counties, as the mine will be located in Manatee County, but the beneficiation plant would be located in DeSoto County.⁶ The direct impacts include forecast mining activities on the existing mines operating in the counties (Wingate and Wingate Extension) and the offsite alternative, Pine Level/Keys Tract. This analysis assumes that a permit for constructing and operating the Wingate East and Desoto Alternatives are not issued (the impacts of issuing a permit for the Wingate East Alternative on Manatee County and of issuing a permit to operate the Desoto alternative on DeSoto

⁶ The Pine Level/Keys Alternative would be located in Manatee County, however the County has an ordinance prohibiting the siting and operation of a beneficiation plant in the County, thus it was assumed for this analysis, that the beneficiation plant for this alternative would be located in Desoto County.

County were presented earlier in this analysis, and the impacts on DeSoto and Manatee Counties combined of issuing permits for construction and operation of all three alternatives: Desoto, Wingate East, and Pine Level/Key Alternatives are presented later in this analysis). The data show agricultural production on the Applicants' Preferred and offsite alternative mine sites declining each decade of the forecast period.

This analysis assumes that a beneficiation plant to serve the Pine Level/Keys Alternative would be constructed in the second decade. The analysis for this individual alternative assumes that permits for operation of the Desoto Alternative are not issued, so the beneficiation plant that would be constructed to serve the Desoto Alternative, will not be available to process phosphate rock from the Pine Level/Keys Alternative, and thus a new beneficiation plant would need to be constructed to serve this alternative. The existing mines (Wingate and Wingate Extension) end rock production in the first decade, and the potential Pine Level/Keys mine would start operations at the beginning of the second decade (2020), with rock production ending in 2045.

TABLE 21

Forecast Direct Impacts by Decade on Manatee and DeSoto Counties With Pine Level/Keys Alternative*Central Florida Phosphate District, Florida*

	Years 1-10	Years 11-20 ¹	Years 21-30	Years 31-40	Years 41-50
Income					
Income/Revenue attributed to Mining	\$2,454,100,000	\$7,337,700,000	\$7,337,700,000	\$7,337,700,000	\$3,668,900,000
Beneficiation Plant Construction	\$0	\$1,000,000,000	\$0	\$0	\$0
Income/Revenue attributed to Agriculture	\$42,200,000	\$37,000,000	\$28,600,000	\$19,300,000	\$12,400,000
Total	\$2,496,300,000	\$8,374,700,000	\$7,366,300,000	\$7,357,000,000	\$3,681,300,000
Local Government Revenues					
Property Taxes	\$25,600,000	\$24,800,000	\$36,900,000	\$44,800,000	\$49,600,000
Severance Taxes	\$5,600,000	\$18,700,000	\$18,700,000	\$18,700,000	\$9,400,000
Total	\$31,200,000	\$43,500,000	\$55,600,000	\$63,500,000	\$59,000,000

Note: Figures are totals for each 10-year period.

¹Includes \$1 billion for construction of a beneficiation plant.

The net impacts of permitting the Pine Level/Keys Alternative on DeSoto and Manatee Counties are summarized in Table 22. The net present value of the difference in output and labor income in DeSoto and Manatee Counties between the Pine Level/Keys Alternative and No Action Alternative, amounts to \$19.0 billion, and \$5.6 billion, respectively. The Pine Level/Keys Mine is forecast to increase employment in DeSoto and Manatee Counties by an average of 2,136 jobs over the 50-year forecast period. The 10 year totals for direct, indirect, induced, and total impacts by decade for DeSoto and Manatee Counties combined, for the Pine Level/Keys Alternative is presented in Appendix B. In addition, the calculation of the present value of the impacts of the Pine Level/Keys Alternative is also presented in Appendix B.

TABLE 22

Net Impacts on Manatee and DeSoto Counties With Pine Level Keys Extension Alternative*Central Florida Phosphate District, Florida*

	No Action	With Mines	Difference
Average Annual Employment	232	2,368	2,136
Present Value Labor Income	\$809,700,000	\$6,427,500,000	\$5,617,800,000
Present Value - Value Added	\$1,613,900,000	\$12,718,900,000	\$11,105,000,000
Present Value Output	\$2,756,900,000	\$21,741,500,000	\$18,984,600,000

3.5.7 Offsite Alternative A-2

Offsite Alternative A-2 (Hardee County) was not evaluated as part of the economic analysis presented in this TM because of the lack of a site plan or mining plan for this site. While the economic impacts of mining this site would likely be similar to other mines of similar size and annual phosphate production, insufficient information is available to allow a quantitative analysis of its economic impacts.

3.5.8 Offsite Alternative W-2

Offsite Alternative W-2 (Manatee County) was not evaluated as part of the economic analysis presented in this TM because of the lack of a site plan or mining plan for this site. While the economic impacts of mining this site would likely be similar to other mines of similar size and annual phosphate production, insufficient information is available to allow a quantitative analysis of its economic impacts.

3.6 Cumulative Impacts

Several of the Applicants' Preferred and reasonably foreseeable mines are in a single county, or the direct impacts of a given mine are split between two counties. In addition, the combined effects of the mines on the region are expected to exceed the effects on their host counties, as many of the indirect and induced impacts will accrue to other counties in the 8-county area. This section presents the results of the cumulative impacts analyses for DeSoto and Manatee Counties together, the three Alternatives in Hardee County, and for the 8-county region, with all of the Applicants' Preferred Alternatives and the two reasonably foreseeable alternatives.

3.6.1 Desoto, Wingate East, and Pine Level/Keys Alternatives – DeSoto and Manatee Counties

The estimated combined direct economic impact of the Desoto, Wingate East, and Pine Level/Keys Alternatives are presented in Table 23. The data show that total income generated by these Alternatives, the construction of the beneficiation plant, and the agricultural activities on the mine sites in Manatee and DeSoto Counties would increase from \$3.6 billion in the first decade to \$6.1 billion in the second decade, and \$10.9 billion in the third decade, before falling in the fourth and fifth decades to \$8.2 and \$7.8 billion, respectively. Of the total income to the region, a portion will be redistributed to local governments through property and severance taxes. The local government revenues are projected to range from a low of \$32.2 million in the first decade, to a high of \$91.4 million in the third decade.

TABLE 23

Forecast Direct Impacts by Decade for DeSoto and Manatee Counties Combined With Desoto, Wingate East, and Pine Level/Keys Alternatives

Central Florida Phosphate District, Florida

	Years 1-10 ¹	Years 11-20	Years 21-30	Years 31-40	Years 41-50
Income					
Income/Revenue attributed to Mining	\$2,573,200,000	\$6,093,200,000	\$10,864,300,000	\$8,151,500,000	\$7,805,800,000
Beneficiation Plant Construction	\$1,000,000,000				
Income/Revenue attributed to Agriculture	\$42,200,000	\$39,500,000	\$33,200,000	\$22,600,000	\$12,000,000
Total	\$3,615,400,000	\$6,132,700,000	\$10,897,500,000	\$8,174,100,000	\$7,817,800,000
Local Government Revenues					
Property Taxes	\$26,400,000	\$52,300,000	\$56,100,000	\$42,700,000	\$38,800,000
Severance Taxes	\$5,800,000	\$25,300,000	\$35,300,000	\$20,800,000	\$19,900,000
Total	\$32,200,000	\$77,600,000	\$91,400,000	\$63,500,000	\$58,700,000

Note: Figures are totals for each 10-year period.

¹Includes \$1 billion for construction of a beneficiation plant.

Table 24 shows that the net present value of output with the two Applicants' Preferred and one reasonably foreseeable mine in DeSoto and Manatee Counties would increase by \$22.2 billion with permitting of the mines. The net present value of labor income is similarly forecast to increase by \$6.6 billion with the mines. Average

annual employment over the 50-year period is projected to increase by 2,647 jobs, as compared to the No Action Alternative. The 10 year totals for direct, indirect, induced, and total impacts by decade for DeSoto and Manatee Counties for the Desoto, Wingate East, and Pine Level/Keys Mines Alternatives are presented in Attachment C. Attachment C also presents the calculation of the present value of the total output, labor compensation, and value added impacts for the Desoto, Wingate East, and Pine Level/Keys Mines Alternatives.

TABLE 24

Net Impacts for DeSoto and Manatee Counties Combined With Desoto, Wingate East, and Pine Level/Keys Mines Alternatives

Central Florida Phosphate District, Florida

	No Action	With Mines	Difference
Average Annual Employment	232	2,879	2,647
Present Value Labor Income	\$809,713,334	\$7,383,600,000	\$6,573,886,666
Present Value - Value Added	\$1,613,930,298	\$14,609,500,000	\$12,995,569,702
Present Value Output	\$2,756,938,523	\$24,972,700,000	\$22,215,761,477

3.6.2 Ona, South Pasture Mine Extension, and Pioneer Alternatives – Hardee County

The estimated combined direct economic impact of the Ona, South Pasture Mine Extension, and Pioneer Mines is presented in Table 25. The data shows the 10 year total output generated by these mines, the construction of the beneficiation plant, and the agricultural activities on the mine sites in Hardee County would increase from \$9.6 billion in the first decade to \$8.8 billion in the second decade, then decline to \$7.4 billion in the third decade, \$5.5 billion in the fourth decade, and \$5.2 billion in the fifth decade. The portion of this income redistributed to local governments would range from a low of \$69.5 million in the 3rd decade, to a high of \$86.1 million in the second decade.

TABLE 25

Forecast Direct Impacts by Decade on Hardee County With Ona, South Pasture Mine Extension, and Pioneer Alternatives

Central Florida Phosphate District, Florida

	Years 1-10 ¹	Years 11-20	Years 21-30	Years 31-40	Years 41-50
Income					
Income/Revenue attributed to Mining	\$8,508,400,000	\$8,714,900,000	\$7,407,600,000	\$5,446,800,000	\$5,172,300,000
Beneficiation Plant construction	\$1,000,000,000				
Income/Revenue attributed to Agriculture	\$47,300,000	\$37,700,000	\$28,700,000	\$20,200,000	\$13,800,000
Total	\$9,555,700,000	\$8,752,600,000	\$7,436,300,000	\$5,467,000,000	\$5,186,100,000
Local Government Revenues					
Property Taxes	\$39,400,000	\$46,500,000	\$35,800,000	\$58,900,000	\$59,900,000
Severance Taxes	\$34,400,000	\$39,600,000	\$33,700,000	\$24,800,000	\$23,500,000
Total	\$73,800,000	\$86,100,000	\$69,500,000	\$83,700,000	\$83,400,000

Note: Figures are totals for each 10-year period.

¹Includes \$1 billion for construction of a beneficiation plant.

Table 26 shows that the net present value of income with the three Applicants' Preferred Alternatives and the Pioneer mine, as an extension to the Ona mine, in Hardee County would increase by \$16.8 billion with permitting of the mines. The net present value of labor income is similarly forecast to increase by \$4.9 billion with the mines. Average annual employment over the 50-year period is projected to increase by 1,699 jobs, as compared to the No Action Alternative. The 10 year totals for direct, indirect, induced, and total impacts by decade for Hardee County for the With Ona, South Pasture Mine Extension, and Pioneer Mines Alternatives are presented in Attachment C. The calculation of the present value of the total output, labor compensation, and value added

impacts for the Ona, South Pasture Extension, and Pioneer Mines Alternative for Hardee County are also presented in Attachment C.

TABLE 26
Net Impacts on Hardee County With Ona, South Pasture Mine Extension, and Pioneer Mines Alternative
Central Florida Phosphate District, Florida

	No Action	With Mines	Difference
Average Annual Employment	840	2,539	1,699
Present Value Labor Income	\$3,296,500,000	\$8,177,800,000	\$4,881,300,000
Present Value - Value Added	\$6,798,600,000	\$16,786,400,000	\$9,987,800,000
Present Value Output	\$11,459,900,000	\$28,281,500,000	\$16,821,600,000

3.6.3 Cumulative Effects of All Mines Included on the 8-county Region

Table 27 presents the projected direct 10 year total output by decade over the forecast 50-year period, property taxes and the portion of the state's severance tax revenues distributed to the local governments in the 8-county region, assuming that all four of the Applicants' Preferred and the two reasonably foreseeable mines receive permits to allow their construction and operation. The data show that with these new mines, total mining activity is expected to increase from \$14.5 billion in the first decade to \$14.8 billion in the second decade, increase to \$18.3 billion in the third decade, before declining to \$13.6 and \$13.0 billion in the fourth and fifth decades, respectively. Agricultural production declines relative to the No Action Alternative as lands are removed from agricultural production to be used for mining. The level of agricultural activities on the current and Applicants' Preferred and reasonably foreseeable mine sites are forecast to decline throughout the study period, from \$109 million in the first decade to \$43.6 million in the fifth decade. Table 27 data also show \$2 billion in total expenditures for construction of two beneficiation plants (for Ona and Desoto Mines) during the first decade of the analysis. The portion of the income redistributed to local governments amount to \$150 million in the first decade, but are expected to increase to \$218 million in the second decade, before declining to \$165.9 million in the fifth decade.

TABLE 27
Projected Areawide Direct Impacts by Decade With All Applicants' Preferred and Reasonably Foreseeable Mines
Central Florida Phosphate District, Florida

	Years 1-10 ¹	Years 11-20	Years 21-30	Years 31-40	Years 41-50
Income					
Income/Revenue attributed to Mining	\$14,526,300,000	\$14,808,000,000	\$18,271,900,000	\$13,598,300,000	\$12,978,100,000
Beneficiation Plant construction	\$2,000,000,000				
Income/Revenue attributed to Agriculture	\$109,200,000	\$94,900,000	\$79,700,000	\$60,600,000	\$43,600,000
Total	\$16,635,500,000	\$14,902,900,000	\$18,351,600,000	\$13,658,900,000	\$13,021,700,000
Local Government Revenues					
Property Taxes	\$91,900,000	\$153,500,000	\$147,300,000	\$125,500,000	\$122,500,000
Severance Taxes	\$58,400,000	\$64,900,000	\$69,000,000	\$45,500,000	\$43,400,000
Total	\$150,300,000	\$218,400,000	\$216,300,000	\$171,000,000	\$165,900,000

Note: Figures are totals for each 10-year period.

¹Includes \$2 billion for construction of 2 beneficiation plants.

Table 28 presents a calculation of the present value of the net impacts of the All Mines Alternative as compared to the No Action Alternative. The net present value of the difference in output between the All Mines and No Action Alternatives amounts to \$50.1 billion. The net present value of the difference in employee compensation or labor income between the two cases is estimated at \$14.8 billion. The All Mines Alternative is forecast to increase

employment by an average of 6,340 jobs over the 50-year study period as compared to the No Action Alternative. As most of the output and employment generated by phosphate rock production is ongoing, the projected increase in employment, labor income, value added, and output represents jobs and output that would not be lost when compared to the No Action Alternative, not an increase in employment or output in comparison to current levels. Attachment C presents the estimates of the 10 year total direct, indirect, induced, and total impacts by decade for the All Mines Alternative, and the calculation of the present value estimates for the All Mines Alternative presented in Table 28.

It should be noted that the results presented in Table 28 assume that all four of the Applicants' Preferred Alternatives and the two reasonably foreseeable alternatives are permitted. If some, but not all of these mines are permitted, the impacts on the 8-county region can be expected to fall somewhere between the results for the No Action Alternative and the With Mining Alternative for the 8-county region. Where these impacts fall within this range will depend on which mines are permitted, and which are not. It should also be noted that the summation of the individual county impacts will be less than the impacts for the 8-county region, because the areawide analysis more holistically accounts for the indirect and induced impacts that accrue to the counties in the AEIS study area that are not hosting the specific mines.

TABLE 28
Areawide Net Impacts of the With Mining Alternative as Compared to No Action Alternative
Central Florida Phosphate District, Florida

	No Action	With Mine	Difference
Average Annual Employment	2,053	8,393	6,340
Present Value Labor Income	\$6,706,500,000	\$21,546,800,000	\$14,840,300,000
Present Value - Value Added	\$13,180,900,000	\$42,292,000,000	\$29,111,100,000
Present Value Output	\$22,704,500,000	\$72,835,500,000	\$50,131,000,000

4.0 Findings of Other Studies

A number of other studies have assessed the impacts of the phosphate industry on areas within and around the CFPD. These other economic evaluations are relevant in that they generally support the conclusion that the phosphate mining industry has a very substantial economic impact on the counties and the overall central Florida region within which mining projects occur. The different methodologies applied make direct comparison of the predicted economic effects difficult, but the net results do converge toward a similar conclusion. The following is a synopsis of the findings of several of those studies.

4.1 Economic Impact of Ona Mine to Hardee County (Hazen and Sawyer, 2003)

This study analyzed the potential effects of the Ona Mine on employment and income of Hardee County residents. Effects of the proposed project with and without the proposed beneficiation plant in Hardee County were evaluated to compare the 50-year period with baseline land use projections. The baseline projection of Ona Mine land use without mining anticipated significant residential development of mine property. This study found that with a beneficiation plant, the county would experience an increase in net present value compared to the No Action Alternative over a 50-year period of \$86.7 million in income, \$5.8 million in ad valorem tax revenues, \$5 million in severance tax revenues, and would experience an average growth in employment of 73 additional jobs annually.⁷ Without the beneficiation plant, income would decrease by \$64.4 million, ad valorem tax revenues would decline by \$7.8 million, severance tax revenues would still increase by \$5 million, but employment would decrease by an average of 100 jobs annually.

⁷ Income consists of employee income, proprietary income, and other property type income.

4.2 Net Economic Impact Analysis for Proposed Extension of South Fort Meade Phosphate Mine (EcoNorthwest, 2008)

The analysis evaluated the net economic benefits of extending the South Fort Meade Mine into Hardee County. This report noted the small size, rural nature, and lack of industrial diversification of county. The proposed extension of mining into Hardee County was predicted to generate \$98.3 million in personal income for Hardee County residents and businesses, compared to the No Action Alternative if this mine was not authorized to be extended into the county.

4.3 Net Economic Impacts of Phosphate Mining by Mosaic Fertilizers, LLC on Five Central Florida Counties, 2011-2050 (EcoNorthwest, 2011)

This study examined the potential economic impact of Mosaic's three proposed new phosphate mining activities (Ona, Desoto, and Wingate East projects) on DeSoto, Hardee, Hillsborough, Manatee, and Polk Counties. It compared "with" and "without mining" alternatives. The analysis included some shipping impacts, but excluded analysis of the effects of fertilizer plants on the economy. The analysis led to EcoNorthwest's conclusion that losses in farm employment and output because land was being used for mining was more than offset by increases in employment and output from the mining operations. The results indicated that "with mining," the present value of economic output increased by \$38.9 billion, and labor income increased by \$4.7 billion compared to the "without mining" alternative.

4.4 The Local and Regional Economic Impact of the Tampa Port Authority (Martin and Associates, 2006)

This study estimated the regional economic impacts of businesses using the Port of Tampa. It was found that the phosphate industry was responsible for 67,000 direct and indirect jobs in Central Florida. The study further found that cargo moving through the port supports nearly 51,000 jobs throughout the state, the majority of which were associated with phosphate rock or fertilizer movement through the Port of Tampa. These statistics are provided for general reference although it is acknowledged that the Tampa Port Authority's study did not differentiate between the economic effects of phosphate mining as opposed to other aspects of the overall phosphate industry's operations in this part of Florida.

5.0 Summary

The evaluation of the potential economic effects of the Applicants' Preferred Alternatives and two of the offsite alternatives mine projects in the CFPD addresses the economic effects over the timelines of the anticipated mine project life cycles. The direct, indirect, and induced impacts of the individual mine projects on their host counties result in net benefits to the counties in terms of overall labor compensation and total predicted income to the region. Individual economic impact estimates for each county are presented, with multiple county analyses provided for the mine example expected to concurrently affect both Manatee and DeSoto Counties for portions of the applicable mine life cycle.

When the cumulative effects of the various proposed projects are considered, the net economic benefits to the AEIS study area are substantial. While the economic effects would have the greatest impact on Hardee, DeSoto, and Manatee Counties, in that order, all eight of the counties included in this evaluation would experience some level of economic benefits because of the indirect and induced effects of the mine projects envisioned.

As mining activities are a major component of the economic base of the AEIS study area, the impact of not permitting the proposed mines would result in a notable decline in output and employment in this region. Permitting of the proposed mines is not expected to increase employment and output in the region compared to current levels of activity, but rather reduce the decline in employment and output that would otherwise occur as the current operating mines are exhausted.

6.0 References

EcoNorthwest. 2008. *A Net Economic Impact Analysis & Strategic Review for Hardee County, Florida, Regarding the Mosaic Fertilizer, LLC for Proposed Extension of South Fort Meade Phosphate Mine*. February.

EcoNorthwest. 2011. *The Net Economic Impacts of Phosphate Mining by Mosaic Fertilizer, LLC, on Five Central Florida Counties, 2011-2050*. October 25.

Florida Senate. 2012. Summary of Legislation Passed, Budget Subcommittee on Finance and Tax, House Bill 7087, adopted by 2012 Legislature, Tallahassee, Florida.

Hazen and Sawyer. 2003. *Economic Impact of the Ona Mine to Hardee County, Final Report*, July 28. http://protectpeace river.org/resources_old/Ona_Economic_Impact_Study-Final.pdf.

Lynch, Tim. 2000. *Analyzing the Economic Impact of Transportation Projects Using RIMS II, IMPLAN, and REMI*. Florida State University, Institute for Science and Public Affairs, Center for Economic Forecasting and Analysis. Prepared for: Office of Research and Special Programs, U.S. Department of Transportation, Washington, DC. October.

Martin and Associates. 2006. *The Local and Regional Economic Impacts of the Tampa Port Authority*. The Tampa Port Authority, July 28.

Minnesota IMPLAN Group, Inc. (MIG). 2012. Impact Analysis for Planning (IMPLAN) Software. accessed via Internet at www.implan.com, May 2012.

Regional Economic Models, Inc. (REMI). undated what does REMI say? Brochure. <http://www.remi.com/the-remi-model>.

U.S. Census Bureau. 2011b. Commodity 2510: Natural calcium phosphates, natural aluminum calcium phosphates and phosphatic chalk.

U.S. Department of Commerce. 1997. *Regional Multipliers: A User Handbook for the Regional Input-Output Modeling System (RIMS II)*. Third Edition. Economics and Statistics Administration and Bureau of Economic Analysis. March.

White House Office of Management and Budget (OMB). 2012. OMB 2012 Circular A-94: Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs. January.

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Attachment A
No Action Alternative
Economic Analysis Summary Information

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TABLE A-1a
10 Year Totals for Direct, Indirect, Induced, and Total Impacts by Decade
DeSoto County No Action Alternative

DECADE 1-10

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	3	42,965.9	155,905.8	331,157.0
Indirect Effect	2	29,746.2	34,163.5	78,404.9
Induced Effect	0	6,618.7	14,058.8	22,985.2
Total Effect	4	79,330.8	204,128.2	432,547.2

DECADE 11-20

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	3	42,965.9	155,905.8	331,157.0
Indirect Effect	2	29,746.2	34,163.5	78,404.9
Induced Effect	0	6,618.7	14,058.8	22,985.2
Total Effect	4	79,330.8	204,128.2	432,547.2

DECADE 21-30

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	3	42,965.9	155,905.8	331,157.0
Indirect Effect	2	29,746.2	34,163.5	78,404.9
Induced Effect	0	6,618.7	14,058.8	22,985.2
Total Effect	4	79,330.8	204,128.2	432,547.2

DECADE 31-40

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	3	42,965.9	155,905.8	331,157.0
Indirect Effect	2	29,746.2	34,163.5	78,404.9
Induced Effect	0	6,618.7	14,058.8	22,985.2
Total Effect	4	79,330.8	204,128.2	432,547.2

DECADE 41-50

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	3	42,965.9	155,905.8	331,157.0
Indirect Effect	2	29,746.2	34,163.5	78,404.9
Induced Effect	0	6,618.7	14,058.8	22,985.2
Total Effect	4	79,330.8	204,128.2	432,547.2

TABLE A-1b
Calculation of Present Values of Labor Income, Value Added, and Output
DeSoto County No Action Alternative

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
1	79,331	204,128	432,547	1.0200	\$77,775	\$200,126	\$424,066
2	79,331	204,128	432,547	1.0404	\$76,250	\$196,202	\$415,751
3	79,331	204,128	432,547	1.0612	\$74,755	\$192,355	\$407,599
4	79,331	204,128	432,547	1.0824	\$73,289	\$188,583	\$399,607
5	79,331	204,128	432,547	1.1041	\$71,852	\$184,885	\$391,771
6	79,331	204,128	432,547	1.1262	\$70,443	\$181,260	\$384,090
7	79,331	204,128	432,547	1.1487	\$69,062	\$177,706	\$376,558
8	79,331	204,128	432,547	1.1717	\$67,708	\$174,221	\$369,175
9	79,331	204,128	432,547	1.1951	\$66,380	\$170,805	\$361,936
10	79,331	204,128	432,547	1.2190	\$65,079	\$167,456	\$354,839
11	79,331	204,128	432,547	1.2434	\$63,803	\$164,173	\$347,882
12	79,331	204,128	432,547	1.2682	\$62,552	\$160,954	\$341,060
13	79,331	204,128	432,547	1.2936	\$61,325	\$157,798	\$334,373
14	79,331	204,128	432,547	1.3195	\$60,123	\$154,704	\$327,817
15	79,331	204,128	432,547	1.3459	\$58,944	\$151,670	\$321,389
16	79,331	204,128	432,547	1.3728	\$57,788	\$148,696	\$315,087
17	79,331	204,128	432,547	1.4002	\$56,655	\$145,781	\$308,909
18	79,331	204,128	432,547	1.4282	\$55,544	\$142,922	\$302,852
19	79,331	204,128	432,547	1.4568	\$54,455	\$140,120	\$296,914
20	79,331	204,128	432,547	1.4859	\$53,387	\$137,372	\$291,092
21	79,331	204,128	432,547	1.5157	\$52,341	\$134,679	\$285,384
22	79,331	204,128	432,547	1.5460	\$51,314	\$132,038	\$279,788
23	79,331	204,128	432,547	1.5769	\$50,308	\$129,449	\$274,302
24	79,331	204,128	432,547	1.6084	\$49,322	\$126,911	\$268,924
25	79,331	204,128	432,547	1.6406	\$48,355	\$124,422	\$263,651
26	79,331	204,128	432,547	1.6734	\$47,406	\$121,983	\$258,481
27	79,331	204,128	432,547	1.7069	\$46,477	\$119,591	\$253,413
28	79,331	204,128	432,547	1.7410	\$45,566	\$117,246	\$248,444
29	79,331	204,128	432,547	1.7758	\$44,672	\$114,947	\$243,573
30	79,331	204,128	432,547	1.8114	\$43,796	\$112,693	\$238,797
31	79,331	204,128	432,547	1.8476	\$42,937	\$110,484	\$234,114

TABLE A-1b
Calculation of Present Values of Labor Income, Value Added, and Output
DeSoto County No Action Alternative

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
32	79,331	204,128	432,547	1.8845	\$42,096	\$108,317	\$229,524
33	79,331	204,128	432,547	1.9222	\$41,270	\$106,193	\$225,023
34	79,331	204,128	432,547	1.9607	\$40,461	\$104,111	\$220,611
35	79,331	204,128	432,547	1.9999	\$39,668	\$102,070	\$216,286
36	79,331	204,128	432,547	2.0399	\$38,890	\$100,068	\$212,045
37	79,331	204,128	432,547	2.0807	\$38,127	\$98,106	\$207,887
38	79,331	204,128	432,547	2.1223	\$37,380	\$96,183	\$203,811
39	79,331	204,128	432,547	2.1647	\$36,647	\$94,297	\$199,814
40	79,331	204,128	432,547	2.2080	\$35,928	\$92,448	\$195,896
41	79,331	204,128	432,547	2.2522	\$35,224	\$90,635	\$192,055
42	79,331	204,128	432,547	2.2972	\$34,533	\$88,858	\$188,290
43	79,331	204,128	432,547	2.3432	\$33,856	\$87,116	\$184,598
44	79,331	204,128	432,547	2.3901	\$33,192	\$85,407	\$180,978
45	79,331	204,128	432,547	2.4379	\$32,541	\$83,733	\$177,429
46	79,331	204,128	432,547	2.4866	\$31,903	\$82,091	\$173,950
47	79,331	204,128	432,547	2.5363	\$31,278	\$80,481	\$170,540
48	79,331	204,128	432,547	2.5871	\$30,664	\$78,903	\$167,196
49	79,331	204,128	432,547	2.6388	\$30,063	\$77,356	\$163,917
50	79,331	204,128	432,547	2.6916	\$29,474	\$75,839	\$160,703
Total Present Value					\$2,492,860	\$6,414,444	\$13,592,192
Rounded Present Value					\$2,500,000	\$6,400,000	\$13,600,000

TABLE A-2a
10 Year Totals for Direct, Indirect, Induced, and Total Impacts by Decade
No Action Alternative All Counties

DECADE 1-10

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	3,603	\$415,275,461	\$858,272,106	\$1,449,976,166
Indirect Effect	1,687	\$105,445,311	\$175,418,747	\$331,592,437
Induced Effect	2,686	\$115,710,900	\$215,520,112	\$369,892,683
Total Effect	7,976	\$636,431,672	\$1,249,210,966	\$2,151,461,286

DECADE 11-20

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	500	\$48,547,758	\$101,561,741	\$171,693,958
Indirect Effect	223	\$12,788,378	\$20,929,911	\$39,542,451
Induced Effect	316	\$13,629,863	\$25,386,645	\$43,570,564
Total Effect	1,039	\$74,965,999	\$147,878,297	\$254,806,973

DECADE 21-30

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	459	\$43,822,194	\$91,785,857	\$155,215,879
Indirect Effect	204	\$11,585,844	\$18,936,509	\$35,779,339
Induced Effect	286	\$12,312,568	\$22,933,085	\$39,359,570
Total Effect	948	\$67,720,606	\$133,655,452	\$230,354,788

DECADE 31-40

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	102	\$1,604,617	\$4,680,326	\$8,076,729
Indirect Effect	35	\$921,254	\$1,154,534	\$2,164,318
Induced Effect	13	\$561,489	\$1,045,835	\$1,794,938
Total Effect	150	\$3,087,361	\$6,880,695	\$12,035,984

DECADE 41-50

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	102	\$1,604,852	\$4,680,872	\$8,079,957
Indirect Effect	35	\$921,541	\$1,155,080	\$2,165,614
Induced Effect	13	\$561,606	\$1,046,051	\$1,795,308
Total Effect	150	\$3,087,999	\$6,882,003	\$12,040,880

TABLE A2b
Calculation of Present Values of Labor Income, Value Added and Output
No Action Alternative All Counties

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
1	636,431,672	1,249,210,966	2,151,461,286	1.0200	\$623,952,620	\$1,224,716,633	\$2,109,275,771
2	636,431,672	1,249,210,966	2,151,461,286	1.0404	\$611,718,255	\$1,200,702,582	\$2,067,917,422
3	636,431,672	1,249,210,966	2,151,461,286	1.0612	\$599,723,779	\$1,177,159,394	\$2,027,370,022
4	636,431,672	1,249,210,966	2,151,461,286	1.0824	\$587,964,489	\$1,154,077,837	\$1,987,617,668
5	636,431,672	1,249,210,966	2,151,461,286	1.1041	\$576,435,774	\$1,131,448,860	\$1,948,644,773
6	636,431,672	1,249,210,966	2,151,461,286	1.1262	\$565,133,111	\$1,109,263,588	\$1,910,436,052
7	636,431,672	1,249,210,966	2,151,461,286	1.1487	\$554,052,070	\$1,087,513,322	\$1,872,976,521
8	636,431,672	1,249,210,966	2,151,461,286	1.1717	\$543,188,304	\$1,066,189,531	\$1,836,251,492
9	636,431,672	1,249,210,966	2,151,461,286	1.1951	\$532,537,553	\$1,045,283,854	\$1,800,246,560
10	636,431,672	1,249,210,966	2,151,461,286	1.2190	\$522,095,640	\$1,024,788,092	\$1,764,947,608
11	74,965,999	147,878,297	254,806,973	1.2434	\$60,292,382	\$118,933,049	\$204,931,830
12	74,965,999	147,878,297	254,806,973	1.2682	\$59,110,179	\$116,601,028	\$200,913,559
13	74,965,999	147,878,297	254,806,973	1.2936	\$57,951,156	\$114,314,733	\$196,974,078
14	74,965,999	147,878,297	254,806,973	1.3195	\$56,814,858	\$112,073,268	\$193,111,841
15	74,965,999	147,878,297	254,806,973	1.3459	\$55,700,842	\$109,875,753	\$189,325,334
16	74,965,999	147,878,297	254,806,973	1.3728	\$54,608,668	\$107,721,326	\$185,613,073
17	74,965,999	147,878,297	254,806,973	1.4002	\$53,537,910	\$105,609,144	\$181,973,601
18	74,965,999	147,878,297	254,806,973	1.4282	\$52,488,147	\$103,538,376	\$178,405,491
19	74,965,999	147,878,297	254,806,973	1.4568	\$51,458,968	\$101,508,212	\$174,907,344
20	74,965,999	147,878,297	254,806,973	1.4859	\$50,449,968	\$99,517,855	\$171,477,788
21	67,720,606	133,655,452	230,354,788	1.5157	\$44,680,418	\$88,182,635	\$151,982,518
22	67,720,606	133,655,452	230,354,788	1.5460	\$43,789,700	\$86,423,004	\$148,940,276
23	67,720,606	133,655,452	230,354,788	1.5769	\$43,804,332	\$86,453,564	\$149,002,469
24	67,720,606	133,655,452	230,354,788	1.6084	\$42,945,423	\$84,758,396	\$146,080,852
25	67,720,606	133,655,452	230,354,788	1.6406	\$42,103,356	\$83,096,466	\$143,216,522
26	67,720,606	133,655,452	230,354,788	1.6734	\$41,277,800	\$81,467,124	\$140,408,354
27	67,720,606	133,655,452	230,354,788	1.7069	\$40,468,431	\$79,869,729	\$137,655,249
28	67,720,606	133,655,452	230,354,788	1.7410	\$39,674,933	\$78,303,656	\$134,956,127
29	67,720,606	133,655,452	230,354,788	1.7758	\$38,896,993	\$76,768,290	\$132,309,928
30	67,720,606	133,655,452	230,354,788	1.8114	\$38,134,307	\$75,263,030	\$129,715,616
31	3,087,361	6,880,695	12,035,984	1.8476	\$37,386,575	\$73,787,284	\$127,172,173

TABLE A2b
Calculation of Present Values of Labor Income, Value Added and Output
No Action Alternative All Counties

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
32	3,087,361	6,880,695	12,035,984	1.8845	\$1,671,022	\$3,724,148	\$6,514,428
33	3,087,361	6,880,695	12,035,984	1.9222	\$1,606,134	\$3,579,535	\$6,261,465
34	3,087,361	6,880,695	12,035,984	1.9607	\$1,574,641	\$3,509,348	\$6,138,691
35	3,087,361	6,880,695	12,035,984	1.9999	\$1,543,766	\$3,440,537	\$6,018,324
36	3,087,361	6,880,695	12,035,984	2.0399	\$1,513,496	\$3,373,076	\$5,900,318
37	3,087,361	6,880,695	12,035,984	2.0807	\$1,483,819	\$3,306,937	\$5,784,625
38	3,087,361	6,880,695	12,035,984	2.1223	\$1,454,725	\$3,242,095	\$5,671,201
39	3,087,361	6,880,695	12,035,984	2.1647	\$1,426,201	\$3,178,525	\$5,560,001
40	3,087,361	6,880,695	12,035,984	2.2080	\$1,398,236	\$3,116,201	\$5,450,982
41	3,087,999	6,882,003	12,040,880	2.2522	\$1,371,103	\$3,055,680	\$5,346,274
42	3,087,999	6,882,003	12,040,880	2.2972	\$1,344,219	\$2,995,764	\$5,241,445
43	3,087,999	6,882,003	12,040,880	2.3432	\$1,317,861	\$2,937,024	\$5,138,671
44	3,087,999	6,882,003	12,040,880	2.3901	\$1,292,021	\$2,879,435	\$5,037,913
45	3,087,999	6,882,003	12,040,880	2.4379	\$1,266,687	\$2,822,976	\$4,939,130
46	3,087,999	6,882,003	12,040,880	2.4866	\$1,241,850	\$2,767,623	\$4,842,285
47	3,087,999	6,882,003	12,040,880	2.5363	\$1,217,500	\$2,713,356	\$4,747,338
48	3,087,999	6,882,003	12,040,880	2.5871	\$1,193,628	\$2,660,153	\$4,654,253
49	3,087,999	6,882,003	12,040,880	2.6388	\$1,170,223	\$2,607,993	\$4,562,993
50	3,087,999	6,882,003	12,040,880	2.6916	\$1,147,278	\$2,556,856	\$4,473,523
Total Present Value					\$6,706,459,906	\$13,180,905,001	\$22,704,488,192
Rounded Present Value					\$6,706,500,000	\$13,180,900,000	\$22,704,500,000

TABLE A-3a
10 Year Totals for Direct, Indirect, Induced, and Total Impacts by Decade
Manatee County No Action Alternative

DECADE 1-10

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	634	72,535,108.9	146,677,320.4	247,637,774.0
Indirect Effect	159	7,749,836.3	11,736,032.4	24,795,756.2
Induced Effect	226	8,080,700.9	16,312,256.7	26,287,676.2
Total Effect	1,019	88,365,646.2	174,725,609.5	298,721,206.4

DECADE 11-20

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	28	466,634.8	1,308,722.9	2,078,601.0
Indirect Effect	7	152,598.6	174,512.9	305,083.2
Induced Effect	2	62,817.8	126,521.9	204,041.3
Total Effect	36	682,051.2	1,609,757.8	2,587,725.6

DECADE 21-30

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	28	467,129.0	1,309,431.0	2,082,791.0
Indirect Effect	7	152,854.0	174,953.0	306,278.0
Induced Effect	2	62,894.0	126,675.0	204,289.0
Total Effect	36	682,877.0	1,611,059.0	2,593,358.0

DECADE 31-40

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	28	467,218.0	1,309,559.0	2,083,546.0
Indirect Effect	7	152,900.0	175,032.0	306,494.0
Induced Effect	2	62,908.0	126,703.0	204,333.0
Total Effect	37	683,026.0	1,611,294.0	2,594,373.0

DECADE 41-50

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	28	467,218.0	1,309,559.0	2,083,546.0
Indirect Effect	7	152,900.0	175,032.0	306,494.0
Induced Effect	2	62,908.0	126,703.0	204,333.0
Total Effect	37	683,026.0	1,611,294.0	2,594,373.0

TABLE A-3b
Calculation of Present Values of Labor Income, Value Added, and Output
Manatee County No Action Alternative

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
1	88,365,646	174,725,609	298,721,206	1.0200	\$86,632,986	\$171,299,617	\$292,863,928
2	88,365,646	174,725,609	298,721,206	1.0404	\$84,934,300	\$167,940,801	\$287,121,498
3	88,365,646	174,725,609	298,721,206	1.0612	\$83,268,922	\$164,647,844	\$281,491,665
4	88,365,646	174,725,609	298,721,206	1.0824	\$81,636,198	\$161,419,455	\$275,972,220
5	88,365,646	174,725,609	298,721,206	1.1041	\$80,035,488	\$158,254,368	\$270,561,000
6	88,365,646	174,725,609	298,721,206	1.1262	\$78,466,165	\$155,151,341	\$265,255,883
7	88,365,646	174,725,609	298,721,206	1.1487	\$76,927,613	\$152,109,158	\$260,054,787
8	88,365,646	174,725,609	298,721,206	1.1717	\$75,419,228	\$149,126,625	\$254,955,673
9	88,365,646	174,725,609	298,721,206	1.1951	\$73,940,420	\$146,202,574	\$249,956,542
10	88,365,646	174,725,609	298,721,206	1.2190	\$72,490,608	\$143,335,857	\$245,055,434
11	682,051	1,609,758	2,587,726	1.2434	\$548,549	\$1,294,669	\$2,081,212
12	682,051	1,609,758	2,587,726	1.2682	\$537,793	\$1,269,283	\$2,040,404
13	682,051	1,609,758	2,587,726	1.2936	\$527,248	\$1,244,395	\$2,000,396
14	682,051	1,609,758	2,587,726	1.3195	\$516,910	\$1,219,995	\$1,961,173
15	682,051	1,609,758	2,587,726	1.3459	\$506,774	\$1,196,074	\$1,922,718
16	682,051	1,609,758	2,587,726	1.3728	\$496,837	\$1,172,621	\$1,885,018
17	682,051	1,609,758	2,587,726	1.4002	\$487,095	\$1,149,629	\$1,848,057
18	682,051	1,609,758	2,587,726	1.4282	\$477,545	\$1,127,087	\$1,811,820
19	682,051	1,609,758	2,587,726	1.4568	\$468,181	\$1,104,987	\$1,776,294
20	682,051	1,609,758	2,587,726	1.4859	\$459,001	\$1,083,321	\$1,741,465
21	682,877	1,611,059	2,593,358	1.5157	\$450,546	\$1,062,938	\$1,711,035
22	682,877	1,611,059	2,593,358	1.5460	\$441,712	\$1,042,096	\$1,677,485
23	682,877	1,611,059	2,593,358	1.5769	\$433,050	\$1,021,663	\$1,644,593
24	682,877	1,611,059	2,593,358	1.6084	\$424,559	\$1,001,630	\$1,612,346
25	682,877	1,611,059	2,593,358	1.6406	\$416,235	\$981,990	\$1,580,732
26	682,877	1,611,059	2,593,358	1.6734	\$408,073	\$962,735	\$1,549,737
27	682,877	1,611,059	2,593,358	1.7069	\$400,072	\$943,858	\$1,519,350
28	682,877	1,611,059	2,593,358	1.7410	\$392,227	\$925,351	\$1,489,559
29	682,877	1,611,059	2,593,358	1.7758	\$384,536	\$907,207	\$1,460,352
30	682,877	1,611,059	2,593,358	1.8114	\$376,997	\$889,419	\$1,431,717
31	683,026	1,611,294	2,594,373	1.8476	\$369,685	\$872,106	\$1,404,194

TABLE A-3b
Calculation of Present Values of Labor Income, Value Added, and Output
Manatee County No Action Alternative

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
32	683,026	1,611,294	2,594,373	1.8845	\$362,436	\$855,006	\$1,376,661
33	683,026	1,611,294	2,594,373	1.9222	\$355,330	\$838,241	\$1,349,667
34	683,026	1,611,294	2,594,373	1.9607	\$348,362	\$821,805	\$1,323,203
35	683,026	1,611,294	2,594,373	1.9999	\$341,532	\$805,691	\$1,297,258
36	683,026	1,611,294	2,594,373	2.0399	\$334,835	\$789,894	\$1,271,822
37	683,026	1,611,294	2,594,373	2.0807	\$328,270	\$774,406	\$1,246,884
38	683,026	1,611,294	2,594,373	2.1223	\$321,833	\$759,221	\$1,222,435
39	683,026	1,611,294	2,594,373	2.1647	\$315,523	\$744,334	\$1,198,466
40	683,026	1,611,294	2,594,373	2.2080	\$309,336	\$729,740	\$1,174,967
41	683,026	1,611,294	2,594,373	2.2522	\$303,271	\$715,431	\$1,151,928
42	683,026	1,611,294	2,594,373	2.2972	\$297,324	\$701,403	\$1,129,341
43	683,026	1,611,294	2,594,373	2.3432	\$291,494	\$687,650	\$1,107,197
44	683,026	1,611,294	2,594,373	2.3901	\$285,779	\$674,167	\$1,085,488
45	683,026	1,611,294	2,594,373	2.4379	\$280,175	\$660,948	\$1,064,204
46	683,026	1,611,294	2,594,373	2.4866	\$274,681	\$647,988	\$1,043,337
47	683,026	1,611,294	2,594,373	2.5363	\$269,296	\$635,282	\$1,022,879
48	683,026	1,611,294	2,594,373	2.5871	\$264,015	\$622,826	\$1,002,823
49	683,026	1,611,294	2,594,373	2.6388	\$258,838	\$610,613	\$983,160
50	683,026	1,611,294	2,594,373	2.6916	\$253,763	\$598,641	\$963,882
Total Present Value					\$809,071,645	\$1,605,633,981	\$2,741,453,889
Rounded Present Value					\$809,100,000	\$1,605,600,000	\$2,741,500,000

TABLE A-4a
10 Year Totals for Direct, Indirect, Induced, and Total Impacts by Decade
Hardee County No Action Alternative

DECADE 1-10

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	2,141	250,203,988.2	506,344,794.4	855,563,487.0
Indirect Effect	270	17,262,745.5	37,407,884.4	66,943,828.4
Induced Effect	580	19,670,751.2	46,065,275.0	71,184,389.8
Total Effect	2,991	287,137,484.9	589,817,953.8	993,691,705.2

DECADE 11-20

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	433	48,361,181.0	99,049,752.2	167,522,385.0
Indirect Effect	57	3,428,529.3	7,360,306.5	13,218,821.1
Induced Effect	112	3,808,833.9	8,919,179.9	13,782,899.8
Total Effect	602	55,598,544.1	115,329,238.6	194,524,105.9

DECADE 21-30

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	394	43,589,972.3	89,524,360.9	151,445,771.0
Indirect Effect	52	3,109,482.8	6,661,371.7	11,973,383.9
Induced Effect	101	3,434,470.2	8,042,444.5	12,428,101.9
Total Effect	547	50,133,925.3	104,228,177.1	175,847,256.9

DECADE 31-40

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	26	370,858.5	2,165,744.1	3,889,859.0
Indirect Effect	6	137,104.2	215,755.1	450,580.7
Induced Effect	1	37,330.2	86,929.7	134,507.0
Total Effect	33	545,292.9	2,468,429.0	4,474,946.7

DECADE 41-50

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	26	370,948.6	2,166,290.2	3,893,087.0
Indirect Effect	6	137,214.6	216,070.9	451,621.8
Induced Effect	1	37,344.9	86,964.0	134,560.1
Total Effect	33	545,508.2	2,469,325.1	4,479,268.8

TABLE A-4b
Calculation of Present Values of Labor Income, Value Added, and Output
Hardee County No Action Alternative

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
1	287,137,485	589,817,954	993,691,705	1.0200	\$281,507,338	\$578,252,896	\$974,207,554
2	287,137,485	589,817,954	993,691,705	1.0404	\$275,987,586	\$566,914,604	\$955,105,445
3	287,137,485	589,817,954	993,691,705	1.0612	\$270,576,065	\$555,798,631	\$936,377,887
4	287,137,485	589,817,954	993,691,705	1.0824	\$265,270,652	\$544,900,619	\$918,017,537
5	287,137,485	589,817,954	993,691,705	1.1041	\$260,069,267	\$534,216,293	\$900,017,193
6	287,137,485	589,817,954	993,691,705	1.1262	\$254,969,869	\$523,741,464	\$882,369,797
7	287,137,485	589,817,954	993,691,705	1.1487	\$249,970,460	\$513,472,023	\$865,068,428
8	287,137,485	589,817,954	993,691,705	1.1717	\$245,069,079	\$503,403,944	\$848,106,302
9	287,137,485	589,817,954	993,691,705	1.1951	\$240,263,803	\$493,533,279	\$831,476,767
10	287,137,485	589,817,954	993,691,705	1.2190	\$235,552,748	\$483,856,156	\$815,173,301
11	55,598,544	115,329,239	194,524,106	1.2434	\$44,715,854	\$92,755,044	\$156,448,549
12	55,598,544	115,329,239	194,524,106	1.2682	\$43,839,073	\$90,936,318	\$153,380,930
13	55,598,544	115,329,239	194,524,106	1.2936	\$42,979,483	\$89,153,253	\$150,373,461
14	55,598,544	115,329,239	194,524,106	1.3195	\$42,136,748	\$87,405,150	\$147,424,962
15	55,598,544	115,329,239	194,524,106	1.3459	\$41,310,537	\$85,691,323	\$144,534,276
16	55,598,544	115,329,239	194,524,106	1.3728	\$40,500,527	\$84,011,101	\$141,700,271
17	55,598,544	115,329,239	194,524,106	1.4002	\$39,706,399	\$82,363,825	\$138,921,834
18	55,598,544	115,329,239	194,524,106	1.4282	\$38,927,842	\$80,748,848	\$136,197,876
19	55,598,544	115,329,239	194,524,106	1.4568	\$38,164,551	\$79,165,537	\$133,527,330
20	55,598,544	115,329,239	194,524,106	1.4859	\$37,416,226	\$77,613,271	\$130,909,147
21	50,071,710	103,944,367	175,378,081	1.5157	\$33,036,103	\$68,579,980	\$115,710,216
22	50,071,710	103,944,367	175,378,081	1.5460	\$32,388,337	\$67,235,274	\$113,441,389
23	50,071,710	103,944,367	175,378,081	1.5769	\$31,753,271	\$65,916,936	\$111,217,048
24	50,071,710	103,944,367	175,378,081	1.6084	\$31,130,658	\$64,624,447	\$109,036,321
25	50,071,710	103,944,367	175,378,081	1.6406	\$30,520,253	\$63,357,301	\$106,898,354
26	50,071,710	103,944,367	175,378,081	1.6734	\$29,921,817	\$62,115,001	\$104,802,308
27	50,071,710	103,944,367	175,378,081	1.7069	\$29,335,114	\$60,897,059	\$102,747,361
28	50,071,710	103,944,367	175,378,081	1.7410	\$28,759,916	\$59,702,999	\$100,732,707
29	50,071,710	103,944,367	175,378,081	1.7758	\$28,195,996	\$58,532,352	\$98,757,556
30	50,071,710	103,944,367	175,378,081	1.8114	\$27,643,133	\$57,384,659	\$96,821,133
31	545,293	2,468,429	4,474,947	1.8476	\$295,138	\$1,336,027	\$2,422,047

TABLE A-4b
Calculation of Present Values of Labor Income, Value Added, and Output
Hardee County No Action Alternative

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
32	545,293	2,468,429	4,474,947	1.8845	\$289,351	\$1,309,831	\$2,374,556
33	545,293	2,468,429	4,474,947	1.9222	\$283,677	\$1,284,148	\$2,327,996
34	545,293	2,468,429	4,474,947	1.9607	\$278,115	\$1,258,968	\$2,282,349
35	545,293	2,468,429	4,474,947	1.9999	\$272,661	\$1,234,283	\$2,237,597
36	545,293	2,468,429	4,474,947	2.0399	\$267,315	\$1,210,081	\$2,193,722
37	545,293	2,468,429	4,474,947	2.0807	\$262,074	\$1,186,354	\$2,150,708
38	545,293	2,468,429	4,474,947	2.1223	\$256,935	\$1,163,092	\$2,108,538
39	545,293	2,468,429	4,474,947	2.1647	\$251,897	\$1,140,286	\$2,067,194
40	545,293	2,468,429	4,474,947	2.2080	\$246,958	\$1,117,928	\$2,026,660
41	545,508	2,469,325	4,479,269	2.2522	\$242,211	\$1,096,406	\$1,988,841
42	545,508	2,469,325	4,479,269	2.2972	\$237,462	\$1,074,907	\$1,949,844
43	545,508	2,469,325	4,479,269	2.3432	\$232,806	\$1,053,831	\$1,911,612
44	545,508	2,469,325	4,479,269	2.3901	\$228,241	\$1,033,167	\$1,874,129
45	545,508	2,469,325	4,479,269	2.4379	\$223,766	\$1,012,909	\$1,837,382
46	545,508	2,469,325	4,479,269	2.4866	\$219,378	\$993,048	\$1,801,355
47	545,508	2,469,325	4,479,269	2.5363	\$215,077	\$973,577	\$1,766,034
48	545,508	2,469,325	4,479,269	2.5871	\$210,859	\$954,487	\$1,731,406
49	545,508	2,469,325	4,479,269	2.6388	\$206,725	\$935,772	\$1,697,457
50	545,508	2,469,325	4,479,269	2.6916	\$202,671	\$917,423	\$1,664,173
Total Present Value					\$3,296,542,021	\$6,798,566,110	\$11,459,916,838
Rounded Present Value					\$3,296,500,000	\$6,798,600,000	\$11,459,900,000

TABLE A-5a
10 Year Totals for Direct, Indirect, Induced, and Total Impacts by Decade
Manatee and DeSoto County No Action Alternative

DECADE 1-10

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	631	72,504,498.3	146,833,235.7	247,968,932.0
Indirect Effect	159	7,712,620.8	11,749,051.0	24,661,264.4
Induced Effect	229	8,189,111.3	16,566,114.2	26,738,965.2
Total Effect	1,018	88,406,230.5	175,148,400.9	299,369,161.7

DECADE 11-20

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	25	442,305.0	1,464,637.4	2,409,758.0
Indirect Effect	9	187,587.9	215,056.7	398,281.9
Induced Effect	2	64,786.4	130,742.2	211,199.2
Total Effect	36	694,679.4	1,810,436.3	3,019,239.1

DECADE 21-30

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	25	442,537.9	1,465,218.3	2,413,193.0
Indirect Effect	9	187,808.6	215,500.3	399,655.8
Induced Effect	2	64,833.1	130,836.4	211,351.3
Total Effect	36	695,179.6	1,811,554.9	3,024,200.1

DECADE 31-40

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	25	442,537.9	1,465,218.3	2,413,193.0
Indirect Effect	9	187,808.6	215,500.3	399,655.8
Induced Effect	2	64,833.1	130,836.4	211,351.3
Total Effect	36	695,179.6	1,811,554.9	3,024,200.1

DECADE 41-50

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	25	442,537.9	1,465,218.3	2,413,193.0
Indirect Effect	9	187,808.6	215,500.3	399,655.8
Induced Effect	2	64,833.1	130,836.4	211,351.3
Total Effect	36	695,179.6	1,811,554.9	3,024,200.1

TABLE A-5b
Calculation of Present Values of Labor Income, Value Added and Output
Manatee and DeSoto County No Action Alternative

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
1	88,406,230	175,148,401	299,369,162	1.0200	\$86,672,775	\$171,714,118	\$293,499,178
2	88,406,230	175,148,401	299,369,162	1.0404	\$84,973,309	\$168,347,175	\$287,744,292
3	88,406,230	175,148,401	299,369,162	1.0612	\$83,307,165	\$165,046,250	\$282,102,247
4	88,406,230	175,148,401	299,369,162	1.0824	\$81,673,692	\$161,810,049	\$276,570,831
5	88,406,230	175,148,401	299,369,162	1.1041	\$80,072,247	\$158,637,303	\$271,147,873
6	88,406,230	175,148,401	299,369,162	1.1262	\$78,502,203	\$155,526,768	\$265,831,248
7	88,406,230	175,148,401	299,369,162	1.1487	\$76,962,944	\$152,477,223	\$260,618,871
8	88,406,230	175,148,401	299,369,162	1.1717	\$75,453,866	\$149,487,474	\$255,508,697
9	88,406,230	175,148,401	299,369,162	1.1951	\$73,974,379	\$146,556,347	\$250,498,722
10	88,406,230	175,148,401	299,369,162	1.2190	\$72,523,901	\$143,682,693	\$245,586,983
11	694,679	1,810,436	3,019,239	1.2434	\$558,705	\$1,456,067	\$2,428,262
12	694,679	1,810,436	3,019,239	1.2682	\$547,750	\$1,427,517	\$2,380,649
13	694,679	1,810,436	3,019,239	1.2936	\$537,010	\$1,399,526	\$2,333,970
14	694,679	1,810,436	3,019,239	1.3195	\$526,480	\$1,372,084	\$2,288,206
15	694,679	1,810,436	3,019,239	1.3459	\$516,157	\$1,345,181	\$2,243,339
16	694,679	1,810,436	3,019,239	1.3728	\$506,036	\$1,318,805	\$2,199,352
17	694,679	1,810,436	3,019,239	1.4002	\$496,114	\$1,292,946	\$2,156,227
18	694,679	1,810,436	3,019,239	1.4282	\$486,386	\$1,267,594	\$2,113,949
19	694,679	1,810,436	3,019,239	1.4568	\$476,849	\$1,242,739	\$2,072,499
20	694,679	1,810,436	3,019,239	1.4859	\$467,499	\$1,218,372	\$2,031,861
21	695,180	1,811,555	3,024,200	1.5157	\$458,663	\$1,195,220	\$1,995,294
22	695,180	1,811,555	3,024,200	1.5460	\$449,669	\$1,171,784	\$1,956,171
23	695,180	1,811,555	3,024,200	1.5769	\$440,852	\$1,148,808	\$1,917,814
24	695,180	1,811,555	3,024,200	1.6084	\$432,208	\$1,126,283	\$1,880,210
25	695,180	1,811,555	3,024,200	1.6406	\$423,733	\$1,104,199	\$1,843,343
26	695,180	1,811,555	3,024,200	1.6734	\$415,425	\$1,082,548	\$1,807,199
27	695,180	1,811,555	3,024,200	1.7069	\$407,279	\$1,061,321	\$1,771,764
28	695,180	1,811,555	3,024,200	1.7410	\$399,293	\$1,040,511	\$1,737,024
29	695,180	1,811,555	3,024,200	1.7758	\$391,464	\$1,020,109	\$1,702,964
30	695,180	1,811,555	3,024,200	1.8114	\$383,788	\$1,000,107	\$1,669,573
31	695,180	1,811,555	3,024,200	1.8476	\$376,263	\$980,497	\$1,636,836

TABLE A-5b
Calculation of Present Values of Labor Income, Value Added and Output
Manatee and DeSoto County No Action Alternative

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
32	695,180	1,811,555	3,024,200	1.8845	\$368,885	\$961,271	\$1,604,741
33	695,180	1,811,555	3,024,200	1.9222	\$361,652	\$942,423	\$1,573,276
34	695,180	1,811,555	3,024,200	1.9607	\$354,561	\$923,944	\$1,542,427
35	695,180	1,811,555	3,024,200	1.9999	\$347,609	\$905,827	\$1,512,184
36	695,180	1,811,555	3,024,200	2.0399	\$340,793	\$888,066	\$1,482,533
37	695,180	1,811,555	3,024,200	2.0807	\$334,111	\$870,653	\$1,453,464
38	695,180	1,811,555	3,024,200	2.1223	\$327,560	\$853,581	\$1,424,964
39	695,180	1,811,555	3,024,200	2.1647	\$321,137	\$836,845	\$1,397,024
40	695,180	1,811,555	3,024,200	2.2080	\$314,840	\$820,436	\$1,369,631
41	695,180	1,811,555	3,024,200	2.2522	\$308,667	\$804,349	\$1,342,776
42	695,180	1,811,555	3,024,200	2.2972	\$302,615	\$788,577	\$1,316,447
43	695,180	1,811,555	3,024,200	2.3432	\$296,681	\$773,115	\$1,290,634
44	695,180	1,811,555	3,024,200	2.3901	\$290,864	\$757,956	\$1,265,328
45	695,180	1,811,555	3,024,200	2.4379	\$285,160	\$743,094	\$1,240,517
46	695,180	1,811,555	3,024,200	2.4866	\$279,569	\$728,524	\$1,216,193
47	695,180	1,811,555	3,024,200	2.5363	\$274,087	\$714,239	\$1,192,346
48	695,180	1,811,555	3,024,200	2.5871	\$268,713	\$700,234	\$1,168,967
49	695,180	1,811,555	3,024,200	2.6388	\$263,444	\$686,504	\$1,146,046
50	695,180	1,811,555	3,024,200	2.6916	\$258,279	\$673,043	\$1,123,575
Total Present Value					\$809,713,334	\$1,613,930,298	\$2,756,938,523
Rounded Present Value					\$809,700,000	\$1,613,900,000	\$2,756,900,000

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Attachment B
Individual Mining Alternatives
Economic Analysis Summary Information

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TABLE B-1a
10 Year Totals for Direct, Indirect, Induced, and Total Impacts by Decade
DeSoto County with Desoto Mine

DECADE 1-10

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	249	29,395,721.1	59,351,337.3	100,331,157.0
Indirect Effect	38	1,959,369.8	3,535,347.0	6,419,350.2
Induced Effect	89	2,947,162.9	6,298,545.9	10,276,163.2
Total Effect	376	34,302,253.8	69,185,230.3	117,026,670.4

DECADE 11-20

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	1,210	143,917,299.3	290,280,263.8	490,429,670.0
Indirect Effect	181	9,478,141.9	17,185,888.1	31,138,437.4
Induced Effect	434	14,419,038.9	30,816,100.0	50,276,679.9
Total Effect	1,824	167,814,480.2	338,282,251.9	571,844,787.3

DECADE 21-30

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	940	111,916,916.0	225,706,312.1	381,315,507.0
Indirect Effect	140	7,359,474.0	13,353,654.4	24,191,306.9
Induced Effect	337	11,211,969.9	23,962,049.1	39,094,228.1
Total Effect	1,417	130,488,359.9	263,022,015.7	444,601,042.0

DECADE 31-40

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	1	10,958.3	41,838.8	120,589.0
Indirect Effect	1	8,988.7	13,031.8	36,483.8
Induced Effect	0	1,814.9	3,854.8	6,302.5
Total Effect	1	21,762.0	58,725.4	163,375.4

DECADE 41-50

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	1	11,740.5	45,273.1	136,996.0
Indirect Effect	1	9,933.0	14,894.3	42,647.3
Induced Effect	00	1,971.9	4,188.1	6,847.4
Total Effect	2	23,645.4	64,355.5	186,490.8

TABLE B-1b
Calculation of Present Values of Labor Income, Value Added, and Output
DeSoto County with Desoto Mine

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
1	34,302,254	69,185,230	117,026,670	1.0200	\$33,629,661	\$67,828,657	\$114,732,030
2	34,302,254	69,185,230	117,026,670	1.0404	\$32,970,256	\$66,498,683	\$112,482,382
3	34,302,254	69,185,230	117,026,670	1.0612	\$32,323,780	\$65,194,788	\$110,276,845
4	34,302,254	69,185,230	117,026,670	1.0824	\$31,689,980	\$63,916,459	\$108,114,554
5	34,302,254	69,185,230	117,026,670	1.1041	\$31,068,608	\$62,663,195	\$105,994,661
6	34,302,254	69,185,230	117,026,670	1.1262	\$30,459,420	\$61,434,505	\$103,916,334
7	34,302,254	69,185,230	117,026,670	1.1487	\$29,862,176	\$60,229,906	\$101,878,759
8	34,302,254	69,185,230	117,026,670	1.1717	\$29,276,643	\$59,048,928	\$99,881,136
9	34,302,254	69,185,230	117,026,670	1.1951	\$28,702,592	\$57,891,106	\$97,922,683
10	34,302,254	69,185,230	117,026,670	1.2190	\$28,139,796	\$56,755,986	\$96,002,630
11	167,814,480	338,282,252	571,844,787	1.2434	\$134,966,984	\$272,067,912	\$459,913,627
12	167,814,480	338,282,252	571,844,787	1.2682	\$132,320,572	\$266,733,247	\$450,895,712
13	167,814,480	338,282,252	571,844,787	1.2936	\$129,726,051	\$261,503,183	\$442,054,620
14	167,814,480	338,282,252	571,844,787	1.3195	\$127,182,403	\$256,375,670	\$433,386,882
15	167,814,480	338,282,252	571,844,787	1.3459	\$124,688,631	\$251,348,696	\$424,889,100
16	167,814,480	338,282,252	571,844,787	1.3728	\$122,243,756	\$246,420,290	\$416,557,941
17	167,814,480	338,282,252	571,844,787	1.4002	\$119,846,819	\$241,588,520	\$408,390,139
18	167,814,480	338,282,252	571,844,787	1.4282	\$117,496,882	\$236,851,490	\$400,382,489
19	167,814,480	338,282,252	571,844,787	1.4568	\$115,193,021	\$232,207,343	\$392,531,852
20	167,814,480	338,282,252	571,844,787	1.4859	\$112,934,334	\$227,654,258	\$384,835,149
21	130,503,670	263,061,481	444,685,668	1.5157	\$86,103,166	\$173,561,604	\$293,392,850
22	130,503,670	263,061,481	444,685,668	1.5460	\$84,414,868	\$170,158,435	\$287,640,049
23	130,503,670	263,061,481	444,685,668	1.5769	\$82,759,675	\$166,821,995	\$282,000,048
24	130,503,670	263,061,481	444,685,668	1.6084	\$81,136,936	\$163,550,975	\$276,470,635
25	130,503,670	263,061,481	444,685,668	1.6406	\$79,546,016	\$160,344,094	\$271,049,642
26	130,503,670	263,061,481	444,685,668	1.6734	\$77,986,290	\$157,200,092	\$265,734,943
27	130,503,670	263,061,481	444,685,668	1.7069	\$76,457,147	\$154,117,737	\$260,524,454
28	130,503,670	263,061,481	444,685,668	1.7410	\$74,957,987	\$151,095,821	\$255,416,132
29	130,503,670	263,061,481	444,685,668	1.7758	\$73,488,223	\$148,133,157	\$250,407,972
30	130,503,670	263,061,481	444,685,668	1.8114	\$72,047,277	\$145,228,586	\$245,498,012
31	21,762	58,725	163,375	1.8476	\$11,779	\$31,785	\$88,426

TABLE B-1b
Calculation of Present Values of Labor Income, Value Added, and Output
DeSoto County with Desoto Mine

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
32	21,762	58,725	163,375	1.8845	\$11,548	\$31,162	\$86,692
33	21,762	58,725	163,375	1.9222	\$11,321	\$30,551	\$84,993
34	21,762	58,725	163,375	1.9607	\$11,099	\$29,952	\$83,326
35	21,762	58,725	163,375	1.9999	\$10,882	\$29,364	\$81,692
36	21,762	58,725	163,375	2.0399	\$10,668	\$28,789	\$80,090
37	21,762	58,725	163,375	2.0807	\$10,459	\$28,224	\$78,520
38	21,762	58,725	163,375	2.1223	\$10,254	\$27,671	\$76,980
39	21,762	58,725	163,375	2.1647	\$10,053	\$27,128	\$75,471
40	21,762	58,725	163,375	2.2080	\$9,856	\$26,596	\$73,991
41	23,645	64,355	186,491	2.2522	\$10,499	\$28,574	\$82,804
42	23,645	64,355	186,491	2.2972	\$10,293	\$28,014	\$81,180
43	23,645	64,355	186,491	2.3432	\$10,091	\$27,465	\$79,588
44	23,645	64,355	186,491	2.3901	\$9,893	\$26,926	\$78,028
45	23,645	64,355	186,491	2.4379	\$9,699	\$26,398	\$76,498
46	23,645	64,355	186,491	2.4866	\$9,509	\$25,881	\$74,998
47	23,645	64,355	186,491	2.5363	\$9,323	\$25,373	\$73,527
48	23,645	64,355	186,491	2.5871	\$9,140	\$24,876	\$72,086
49	23,645	64,355	186,491	2.6388	\$8,961	\$24,388	\$70,672
50	23,645	64,355	186,491	2.6916	\$8,785	\$23,910	\$69,287
Total Present Value					\$2,333,824,060	\$4,704,978,344	\$7,954,743,112
Rounded Present Value					\$2,333,800,000	\$4,705,000,000	\$7,953,700,000

TABLE B-2a
10 Year Totals for Direct, Indirect, Induced, and Total Impacts by Decade
Hardee County with Ona Mine

DECADE 1-10

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	2,389	279,556,747.9	565,540,232.8	955,563,487.0
Indirect Effect	300	19,272,064.7	41,774,397.8	74,751,016.1
Induced Effect	648	21,977,268.8	51,466,785.0	79,531,285.2
Total Effect	3,338	320,806,081.4	658,781,415.5	1,109,845,788.3

DECADE 11-20

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	1,782	208,213,630.8	421,324,115.9	711,936,247.0
Indirect Effect	224	14,363,461.1	31,129,405.6	55,713,892.4
Induced Effect	483	16,369,358.3	38,334,034.2	59,237,345.7
Total Effect	2,488	238,946,450.2	490,787,555.7	826,887,485.1

DECADE 21-30

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	1,739	203,380,964.0	411,443,094.9	695,244,465.0
Indirect Effect	219	14,022,609.9	30,397,759.9	54,404,234.7
Induced Effect	471	15,988,875.7	37,443,049.5	57,860,499.8
Total Effect	2,429	233,392,449.6	479,283,904.4	807,509,199.5

DECADE 31-40

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	1,366	160,098,090.8	323,710,242.1	547,041,493.0
Indirect Effect	172	11,027,446.0	23,917,798.2	42,813,904.9
Induced Effect	371	12,585,375.5	29,472,722.9	45,543,986.8
Total Effect	1,909	183,710,912.3	377,100,763.2	635,399,384.7

DECADE 41-50

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	148	16,166,285.1	33,287,363.2	56,464,170.0
Indirect Effect	20	1,164,562.2	2,496,339.5	4,519,186.6
Induced Effect	38	1,274,579.8	2,984,626.6	4,612,198.3
Total Effect	206	18,605,427.2	38,768,329.4	65,595,554.9

TABLE B-2b
Calculation of Present Values of Labor Income, Value Added, and Output
Hardee County with Ona Mine

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
1	320,806,081	658,781,416	1,109,845,788	1.0200	\$314,515,766	\$645,864,133	\$1,088,084,106
2	320,806,081	658,781,416	1,109,845,788	1.0404	\$308,348,790	\$633,200,130	\$1,066,749,124
3	320,806,081	658,781,416	1,109,845,788	1.0612	\$302,302,736	\$620,784,441	\$1,045,832,474
4	320,806,081	658,781,416	1,109,845,788	1.0824	\$296,375,231	\$608,612,198	\$1,025,325,955
5	320,806,081	658,781,416	1,109,845,788	1.1041	\$290,563,952	\$596,678,625	\$1,005,221,525
6	320,806,081	658,781,416	1,109,845,788	1.1262	\$284,866,619	\$584,979,044	\$985,511,299
7	320,806,081	658,781,416	1,109,845,788	1.1487	\$279,281,000	\$573,508,867	\$966,187,548
8	320,806,081	658,781,416	1,109,845,788	1.1717	\$273,804,901	\$562,263,595	\$947,242,694
9	320,806,081	658,781,416	1,109,845,788	1.1951	\$268,436,178	\$551,238,819	\$928,669,308
10	320,806,081	658,781,416	1,109,845,788	1.2190	\$263,172,723	\$540,430,214	\$910,460,106
11	238,946,450	490,787,556	826,887,485	1.2434	\$192,175,798	\$394,722,291	\$665,035,042
12	238,946,450	490,787,556	826,887,485	1.2682	\$188,407,645	\$386,982,638	\$651,995,139
13	238,946,450	490,787,556	826,887,485	1.2936	\$184,713,378	\$379,394,743	\$639,210,921
14	238,946,450	490,787,556	826,887,485	1.3195	\$181,091,547	\$371,955,631	\$626,677,373
15	238,946,450	490,787,556	826,887,485	1.3459	\$177,540,732	\$364,662,383	\$614,389,581
16	238,946,450	490,787,556	826,887,485	1.3728	\$174,059,541	\$357,512,140	\$602,342,727
17	238,946,450	490,787,556	826,887,485	1.4002	\$170,646,609	\$350,502,098	\$590,532,085
18	238,946,450	490,787,556	826,887,485	1.4282	\$167,300,597	\$343,629,508	\$578,953,025
19	238,946,450	490,787,556	826,887,485	1.4568	\$164,020,193	\$336,891,675	\$567,601,005
20	238,946,450	490,787,556	826,887,485	1.4859	\$160,804,111	\$330,285,956	\$556,471,573
21	233,336,417	479,026,674	807,082,783	1.5157	\$153,949,725	\$316,050,215	\$532,493,702
22	233,336,417	479,026,674	807,082,783	1.5460	\$150,931,103	\$309,853,152	\$522,052,649
23	233,336,417	479,026,674	807,082,783	1.5769	\$147,971,670	\$303,777,600	\$511,816,323
24	233,336,417	479,026,674	807,082,783	1.6084	\$145,070,264	\$297,821,176	\$501,780,709
25	233,336,417	479,026,674	807,082,783	1.6406	\$142,225,749	\$291,981,545	\$491,941,871
26	233,336,417	479,026,674	807,082,783	1.6734	\$139,437,009	\$286,256,417	\$482,295,952
27	233,336,417	479,026,674	807,082,783	1.7069	\$136,702,950	\$280,643,546	\$472,839,169
28	233,336,417	479,026,674	807,082,783	1.7410	\$134,022,500	\$275,140,732	\$463,567,812
29	233,336,417	479,026,674	807,082,783	1.7758	\$131,394,608	\$269,745,815	\$454,478,248
30	233,336,417	479,026,674	807,082,783	1.8114	\$128,818,243	\$264,456,682	\$445,566,909
31	183,710,912	377,100,763	635,399,385	1.8476	\$99,432,791	\$204,104,268	\$343,907,356

TABLE B-2b
Calculation of Present Values of Labor Income, Value Added, and Output
Hardee County with Ona Mine

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
32	183,710,912	377,100,763	635,399,385	1.8845	\$97,483,128	\$200,102,224	\$337,164,075
33	183,710,912	377,100,763	635,399,385	1.9222	\$95,571,694	\$196,178,651	\$330,553,014
34	183,710,912	377,100,763	635,399,385	1.9607	\$93,697,740	\$192,332,010	\$324,071,583
35	183,710,912	377,100,763	635,399,385	1.9999	\$91,860,529	\$188,560,795	\$317,717,238
36	183,710,912	377,100,763	635,399,385	2.0399	\$90,059,342	\$184,863,524	\$311,487,488
37	183,710,912	377,100,763	635,399,385	2.0807	\$88,293,473	\$181,238,749	\$305,379,890
38	183,710,912	377,100,763	635,399,385	2.1223	\$86,562,228	\$177,685,048	\$299,392,049
39	183,710,912	377,100,763	635,399,385	2.1647	\$84,864,930	\$174,201,028	\$293,521,617
40	183,710,912	377,100,763	635,399,385	2.2080	\$83,200,911	\$170,785,321	\$287,766,291
41	18,605,427	38,768,329	65,595,555	2.2522	\$8,261,000	\$17,213,534	\$29,125,096
42	18,605,427	38,768,329	65,595,555	2.2972	\$8,099,019	\$16,876,014	\$28,554,016
43	18,605,427	38,768,329	65,595,555	2.3432	\$7,940,215	\$16,545,112	\$27,994,133
44	18,605,427	38,768,329	65,595,555	2.3901	\$7,784,524	\$16,220,698	\$27,445,229
45	18,605,427	38,768,329	65,595,555	2.4379	\$7,631,887	\$15,902,645	\$26,907,087
46	18,605,427	38,768,329	65,595,555	2.4866	\$7,482,242	\$15,590,828	\$26,379,497
47	18,605,427	38,768,329	65,595,555	2.5363	\$7,335,531	\$15,285,126	\$25,862,252
48	18,605,427	38,768,329	65,595,555	2.5871	\$7,191,697	\$14,985,417	\$25,355,149
49	18,605,427	38,768,329	65,595,555	2.6388	\$7,050,684	\$14,691,586	\$24,857,989
50	18,605,427	38,768,329	65,595,555	2.6916	\$6,912,435	\$14,403,515	\$24,370,578
Total Present Value					\$7,039,667,872	\$14,457,592,103	\$24,359,137,578
Rounded Present Value					\$7,039,700,000	\$14,457,600,000	\$24,359,100,000

TABLE B-3a
10 Year Totals for Direct, Indirect, Induced, and Total Impacts by Decade
Manatee County Wingate East Mine

DECADE 11-10

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	684	76,391,058.8	154,795,824.0	261,203,422.0
Indirect Effect	172	8,238,293.7	12,433,739.9	26,217,774.0
Induced Effect	2384	8,518,315.0	17,195,451.5	27,711,075.0
Total Effect	1,094	93,147,667.5	184,425,015.5	315,132,271.0

DECADE 11-20

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	341	35,785,876.2	72,878,311.6	122,833,658.0
Indirect Effect	86	3,954,298.9	5,916,409.9	12,414,633.7
Induced Effect	112	4,000,467.5	8,075,263.4	13,013,704.6
Total Effect	539	43,740,642.6	86,869,984.8	148,261,996.3

DECADE 21-30

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	338	35,725,558.0	72,672,709.0	122,518,226.0
Indirect Effect	85	3,932,277.0	5,890,648.0	12,370,928.0
Induced Effect	112	3,992,119.0	8,058,446.0	12,986,585.0
Total Effect	535	43,649,954.0	86,621,803.0	147,875,739.0

DECADE 31-40

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	330	35,586,287.0	72,267,329.0	121,889,813.0
Indirect Effect	83	3,886,324.0	5,838,466.0	12,281,778.0
Induced Effect	111	3,973,331.0	8,020,604.0	12,925,557.0
Total Effect	524	43,445,942.0	86,126,398.0	147,097,149.0

DECADE 41-50

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	87	7,478,856.0	15,493,824.0	26,034,826.0
Indirect Effect	22	897,766.0	1,306,605.0	2,700,001.0
Induced Effect	24	843,569.0	1,702,619.0	2,743,958.0
Total Effect	133	9,220,191.0	18,503,047.0	31,478,785.0

TABLE B-3b
Calculation of Present Values of Labor Income, Value Added, and Output
Manatee County Wingate East Mine

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
1	93,147,668	184,425,015	315,132,271	1.0200	\$91,321,243	\$180,808,839	\$308,953,207
2	93,147,668	184,425,015	315,132,271	1.0404	\$89,530,630	\$177,263,567	\$302,895,301
3	93,147,668	184,425,015	315,132,271	1.0612	\$87,775,128	\$173,787,811	\$296,956,177
4	93,147,668	184,425,015	315,132,271	1.0824	\$86,054,047	\$170,380,207	\$291,133,507
5	93,147,668	184,425,015	315,132,271	1.1041	\$84,366,712	\$167,039,419	\$285,425,007
6	93,147,668	184,425,015	315,132,271	1.1262	\$82,712,463	\$163,764,136	\$279,828,438
7	93,147,668	184,425,015	315,132,271	1.1487	\$81,090,650	\$160,553,074	\$274,341,606
8	93,147,668	184,425,015	315,132,271	1.1717	\$79,500,637	\$157,404,975	\$268,962,359
9	93,147,668	184,425,015	315,132,271	1.1951	\$77,941,801	\$154,318,603	\$263,688,587
10	93,147,668	184,425,015	315,132,271	1.2190	\$76,413,531	\$151,292,748	\$258,518,223
11	43,740,643	86,869,985	148,261,996	1.2434	\$35,178,982	\$69,866,318	\$119,241,644
12	43,740,643	86,869,985	148,261,996	1.2682	\$34,489,198	\$68,496,390	\$116,903,572
13	43,740,643	86,869,985	148,261,996	1.2936	\$33,812,939	\$67,153,324	\$114,611,345
14	43,740,643	86,869,985	148,261,996	1.3195	\$33,149,941	\$65,836,592	\$112,364,064
15	43,740,643	86,869,985	148,261,996	1.3459	\$32,499,942	\$64,545,678	\$110,160,847
16	43,740,643	86,869,985	148,261,996	1.3728	\$31,862,688	\$63,280,077	\$108,000,831
17	43,740,643	86,869,985	148,261,996	1.4002	\$31,237,929	\$62,039,291	\$105,883,167
18	43,740,643	86,869,985	148,261,996	1.4282	\$30,625,421	\$60,822,834	\$103,807,027
19	43,740,643	86,869,985	148,261,996	1.4568	\$30,024,923	\$59,630,230	\$101,771,595
20	43,740,643	86,869,985	148,261,996	1.4859	\$29,436,199	\$58,461,009	\$99,776,073
21	43,649,954	86,621,803	147,875,739	1.5157	\$28,799,184	\$57,150,971	\$97,564,836
22	43,649,954	86,621,803	147,875,739	1.5460	\$28,234,494	\$56,030,364	\$95,651,800
23	43,649,954	86,621,803	147,875,739	1.5769	\$27,680,877	\$54,931,729	\$93,776,275
24	43,649,954	86,621,803	147,875,739	1.6084	\$27,138,114	\$53,854,636	\$91,937,524
25	43,649,954	86,621,803	147,875,739	1.6406	\$26,605,994	\$52,798,663	\$90,134,828
26	43,649,954	86,621,803	147,875,739	1.6734	\$26,084,308	\$51,763,395	\$88,367,478
27	43,649,954	86,621,803	147,875,739	1.7069	\$25,572,851	\$50,748,427	\$86,634,783
28	43,649,954	86,621,803	147,875,739	1.7410	\$25,071,423	\$49,753,359	\$84,936,061
29	43,649,954	86,621,803	147,875,739	1.7758	\$24,579,826	\$48,777,803	\$83,270,649
30	43,649,954	86,621,803	147,875,739	1.8114	\$24,097,869	\$47,821,376	\$81,637,891
31	43,445,942	86,126,398	147,097,149	1.8476	\$23,514,941	\$46,615,566	\$79,615,739

TABLE B-3b
Calculation of Present Values of Labor Income, Value Added, and Output
Manatee County Wingate East Mine

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
32	43,445,942	86,126,398	147,097,149	1.8845	\$23,053,864	\$45,701,535	\$78,054,646
33	43,445,942	86,126,398	147,097,149	1.9222	\$22,601,827	\$44,805,427	\$76,524,163
34	43,445,942	86,126,398	147,097,149	1.9607	\$22,158,654	\$43,926,889	\$75,023,689
35	43,445,942	86,126,398	147,097,149	1.9999	\$21,724,171	\$43,065,577	\$73,552,636
36	43,445,942	86,126,398	147,097,149	2.0399	\$21,298,207	\$42,221,154	\$72,110,428
37	43,445,942	86,126,398	147,097,149	2.0807	\$20,880,595	\$41,393,288	\$70,696,498
38	43,445,942	86,126,398	147,097,149	2.1223	\$20,471,171	\$40,581,655	\$69,310,292
39	43,445,942	86,126,398	147,097,149	2.1647	\$20,069,776	\$39,785,937	\$67,951,267
40	43,445,942	86,126,398	147,097,149	2.2080	\$19,676,251	\$39,005,820	\$66,618,889
41	9,220,191	18,503,047	31,478,785	2.2522	\$4,093,859	\$8,215,542	\$13,976,902
42	9,220,191	18,503,047	31,478,785	2.2972	\$4,013,587	\$8,054,453	\$13,702,845
43	9,220,191	18,503,047	31,478,785	2.3432	\$3,934,889	\$7,896,522	\$13,434,162
44	9,220,191	18,503,047	31,478,785	2.3901	\$3,857,735	\$7,741,689	\$13,170,747
45	9,220,191	18,503,047	31,478,785	2.4379	\$3,782,093	\$7,589,891	\$12,912,497
46	9,220,191	18,503,047	31,478,785	2.4866	\$3,707,934	\$7,441,069	\$12,659,311
47	9,220,191	18,503,047	31,478,785	2.5363	\$3,635,230	\$7,295,166	\$12,411,089
48	9,220,191	18,503,047	31,478,785	2.5871	\$3,563,951	\$7,152,124	\$12,167,734
49	9,220,191	18,503,047	31,478,785	2.6388	\$3,494,069	\$7,011,886	\$11,929,151
50	9,220,191	18,503,047	31,478,785	2.6916	\$3,425,558	\$6,874,398	\$11,695,246
Total Present Value					\$1,675,848,305	\$3,322,751,432	\$5,674,652,634
Rounded Present Value					\$1,675,800,000	\$3,322,800,000	\$5,674,700,000

TABLE B-4a
10 Year Totals for Direct, Indirect, Induced, and Total Impacts by Decade
Hardee County With South Pasture Mine Extension

DECADE 1-10

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	2,141	250,203,988.2	506,344,794.4	855,563,487.0
Indirect Effect	270	17,262,745.5	37,407,884.4	66,943,828.4
Induced Effect	580	19,670,751.2	46,065,275.0	71,184,389.8
Total Effect	2,991	287,137,484.9	589,817,953.8	993,691,705.2

DECADE 11-20

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	837	96,312,009.0	195,704,630.4	330,794,663.0
Indirect Effect	107	6,707,149.1	14,487,989.6	25,960,572.9
Induced Effect	223	7,576,493.9	17,742,478.5	27,417,442.2
Total Effect	1,167	110,595,652.1	227,935,098.4	384,172,678.1

DECADE 21-30

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	510	57,898,757.1	118,076,926.7	199,667,355.0
Indirect Effect	66	4,066,156.4	8,759,761.2	15,718,930.7
Induced Effect	134	4,557,171.1	10,671,742.2	16,491,090.1
Total Effect	710	66,522,084.6	137,508,430.1	231,877,375.8

DECADE 31-40

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	22	321,353.1	1,881,123.8	3,378,603.0
Indirect Effect	5	118,958.0	187,358.4	391,399.7
Induced Effect	1	32,358.5	75,353.0	116,594.0
Total Effect	28	472,669.7	2,143,835.2	3,886,596.7

DECADE 41-50

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	23	321,467.7	1,882,348.4	3,406,165.0
Indirect Effect	5	119,881.6	190,428.2	402,126.5
Induced Effect	1	32,434.8	75,530.0	116,868.1
Total Effect	29	473,784.1	2,148,306.5	3,925,159.6

TABLE B-4b
Calculation of Present Values of Labor Income, Value Added, and Output
Hardee County With South Pasture Mine Extension

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
1	170,260,838	350,499,326	590,618,294	1.0200	\$166,922,390	\$343,626,790	\$579,037,543
2	170,260,838	350,499,326	590,618,294	1.0404	\$163,649,402	\$336,889,010	\$567,683,865
3	170,260,838	350,499,326	590,618,294	1.0612	\$160,440,590	\$330,283,343	\$556,552,809
4	170,260,838	350,499,326	590,618,294	1.0824	\$157,294,696	\$323,807,199	\$545,640,009
5	170,260,838	350,499,326	590,618,294	1.1041	\$154,210,487	\$317,458,038	\$534,941,185
6	170,260,838	350,499,326	590,618,294	1.1262	\$151,186,752	\$311,233,371	\$524,452,143
7	170,260,838	350,499,326	590,618,294	1.1487	\$148,222,305	\$305,130,755	\$514,168,767
8	170,260,838	350,499,326	590,618,294	1.1717	\$145,315,986	\$299,147,799	\$504,087,027
9	170,260,838	350,499,326	590,618,294	1.1951	\$142,466,653	\$293,282,156	\$494,202,967
10	170,260,838	350,499,326	590,618,294	1.2190	\$139,673,189	\$287,531,526	\$484,512,713
11	110,650,479	228,185,718	384,597,368	1.2434	\$88,992,090	\$183,521,339	\$309,317,448
12	110,650,479	228,185,718	384,597,368	1.2682	\$87,247,147	\$179,922,881	\$303,252,400
13	110,650,479	228,185,718	384,597,368	1.2936	\$85,536,419	\$176,394,982	\$297,306,275
14	110,650,479	228,185,718	384,597,368	1.3195	\$83,859,234	\$172,936,257	\$291,476,740
15	110,650,479	228,185,718	384,597,368	1.3459	\$82,214,935	\$169,545,350	\$285,761,510
16	110,650,479	228,185,718	384,597,368	1.3728	\$80,602,878	\$166,220,931	\$280,158,343
17	110,650,479	228,185,718	384,597,368	1.4002	\$79,022,429	\$162,961,697	\$274,665,042
18	110,650,479	228,185,718	384,597,368	1.4282	\$77,472,970	\$159,766,370	\$269,279,453
19	110,650,479	228,185,718	384,597,368	1.4568	\$75,953,892	\$156,633,696	\$263,999,464
20	110,650,479	228,185,718	384,597,368	1.4859	\$74,464,600	\$153,562,447	\$258,823,004
21	66,561,266	137,688,940	232,171,966	1.5157	\$43,915,514	\$90,843,833	\$153,181,449
22	66,561,266	137,688,940	232,171,966	1.5460	\$43,054,425	\$89,062,582	\$150,177,891
23	66,561,266	137,688,940	232,171,966	1.5769	\$42,210,221	\$87,316,256	\$147,233,226
24	66,561,266	137,688,940	232,171,966	1.6084	\$41,382,569	\$85,604,173	\$144,346,300
25	66,561,266	137,688,940	232,171,966	1.6406	\$40,571,146	\$83,925,660	\$141,515,981
26	66,561,266	137,688,940	232,171,966	1.6734	\$39,775,634	\$82,280,059	\$138,741,157
27	66,561,266	137,688,940	232,171,966	1.7069	\$38,995,719	\$80,666,724	\$136,020,743
28	66,561,266	137,688,940	232,171,966	1.7410	\$38,231,097	\$79,085,024	\$133,353,669
29	66,561,266	137,688,940	232,171,966	1.7758	\$37,481,468	\$77,534,337	\$130,738,891
30	66,561,266	137,688,940	232,171,966	1.8114	\$36,746,537	\$76,014,056	\$128,175,384
31	472,670	2,143,835	3,886,597	1.8476	\$255,831	\$1,160,342	\$2,103,605

TABLE B-4b
Calculation of Present Values of Labor Income, Value Added, and Output
Hardee County With South Pasture Mine Extension

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
32	472,670	2,143,835	3,886,597	1.8845	\$250,814	\$1,137,590	\$2,062,358
33	472,670	2,143,835	3,886,597	1.9222	\$245,896	\$1,115,285	\$2,021,919
34	472,670	2,143,835	3,886,597	1.9607	\$241,075	\$1,093,416	\$1,982,274
35	472,670	2,143,835	3,886,597	1.9999	\$236,348	\$1,071,977	\$1,943,406
36	472,670	2,143,835	3,886,597	2.0399	\$231,714	\$1,050,958	\$1,905,300
37	472,670	2,143,835	3,886,597	2.0807	\$227,170	\$1,030,351	\$1,867,941
38	472,670	2,143,835	3,886,597	2.1223	\$222,716	\$1,010,148	\$1,831,315
39	472,670	2,143,835	3,886,597	2.1647	\$218,349	\$990,341	\$1,795,406
40	472,670	2,143,835	3,886,597	2.2080	\$214,068	\$970,922	\$1,760,202
41	473,784	2,148,307	3,925,160	2.2522	\$210,365	\$953,870	\$1,742,811
42	473,784	2,148,307	3,925,160	2.2972	\$206,240	\$935,167	\$1,708,638
43	473,784	2,148,307	3,925,160	2.3432	\$202,196	\$916,830	\$1,675,135
44	473,784	2,148,307	3,925,160	2.3901	\$198,232	\$898,853	\$1,642,290
45	473,784	2,148,307	3,925,160	2.4379	\$194,345	\$881,228	\$1,610,088
46	473,784	2,148,307	3,925,160	2.4866	\$190,534	\$863,949	\$1,578,518
47	473,784	2,148,307	3,925,160	2.5363	\$186,798	\$847,009	\$1,547,566
48	473,784	2,148,307	3,925,160	2.5871	\$183,135	\$830,401	\$1,517,222
49	473,784	2,148,307	3,925,160	2.6388	\$179,544	\$814,119	\$1,487,472
50	473,784	2,148,307	3,925,160	2.6916	\$176,024	\$798,156	\$1,458,306
Total Present Value					\$3,800,598,326	\$7,828,321,506	\$13,193,776,070
Rounded Present Value					\$3,800,600,000	\$7,828,300,000	\$13,193,800,000

TABLE B-5a
10 Year Totals for Direct, Indirect, Induced, and Total Impacts by Decade
Manatee and DeSoto Counties and Pine Level/Keys Mine

DECADE 11-10

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	647	72,809,183.0	147,901,371.0	249,624,242.0
Indirect Effect	165	7,837,281.0	11,889,258.0	24,900,195.0
Induced Effect	230	8,233,261.0	16,655,217.0	26,882,897.0
Total Effect	1,042	88,879,725.0	176,445,845.0	301,407,334.0

DECADE 11-20

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	2,091	245,411,088.0	495,864,836.0	837,468,793.0
Indirect Effect	520	25,808,754.0	39,464,752.0	82,935,280.0
Induced Effect	773	27,686,953.0	56,009,828.0	90,403,750.0
Total Effect	3,384	298,906,795.0	591,339,416.0	1,010,807,823.0

DECADE 21-30

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	1,836	215,897,848.0	436,133,848.0	736,629,866.0
Indirect Effect	456	22,681,188.0	34,697,579.0	72,932,409.0
Induced Effect	680	24,354,793.0	49,269,031.0	79,523,604.0
Total Effect	2,972	262,933,829.0	520,100,457.0	889,085,879.0

DECADE 31-40

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	1,827	215,719,322.0	435,510,269.0	735,698,456.0
Indirect Effect	453	22,609,898.0	34,620,601.0	72,809,930.0
Induced Effect	679	24,329,104.0	49,217,185.0	79,439,856.0
Total Effect	2,959	262,658,324.0	519,348,056.0	887,948,242.0

DECADE 41-50

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	917	107,895,401.0	217,865,661.0	368,128,841.0
Indirect Effect	228	11,324,912.0	17,340,669.0	36,482,978.0
Induced Effect	340	12,170,282.0	24,620,156.0	39,738,608.0
Total Effect	1,484	131,390,596.0	259,826,486.0	444,350,427.0

TABLE B-5b
Calculation of Present Values of Labor Income, Value Added, and Output
Manatee and DeSoto Counties and Pine Level/Keys Mine

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
1	88,879,725	176,445,845	301,407,334	1.0200	\$87,136,985	\$172,986,123	\$295,497,386
2	88,879,725	176,445,845	301,407,334	1.0404	\$85,428,417	\$169,594,238	\$289,703,320
3	88,879,725	176,445,845	301,407,334	1.0612	\$83,753,350	\$166,268,861	\$284,022,863
4	88,879,725	176,445,845	301,407,334	1.0824	\$82,111,127	\$163,008,687	\$278,453,787
5	88,879,725	176,445,845	301,407,334	1.1041	\$80,501,105	\$159,812,438	\$272,993,909
6	88,879,725	176,445,845	301,407,334	1.1262	\$78,922,652	\$156,678,861	\$267,641,087
7	88,879,725	176,445,845	301,407,334	1.1487	\$77,375,149	\$153,606,726	\$262,393,223
8	88,879,725	176,445,845	301,407,334	1.1717	\$75,857,989	\$150,594,830	\$257,248,257
9	88,879,725	176,445,845	301,407,334	1.1951	\$74,370,578	\$147,641,990	\$252,204,174
10	88,879,725	176,445,845	301,407,334	1.2190	\$72,912,331	\$144,747,049	\$247,258,994
11	298,906,795	591,339,416	1,010,807,823	1.2434	\$240,399,687	\$475,592,436	\$812,955,372
12	298,906,795	591,339,416	1,010,807,823	1.2682	\$235,685,968	\$466,267,094	\$797,015,070
13	298,906,795	591,339,416	1,010,807,823	1.2936	\$231,064,675	\$457,124,602	\$781,387,324
14	298,906,795	591,339,416	1,010,807,823	1.3195	\$226,533,995	\$448,161,374	\$766,066,004
15	298,906,795	591,339,416	1,010,807,823	1.3459	\$222,092,152	\$439,373,897	\$751,045,102
16	298,906,795	591,339,416	1,010,807,823	1.3728	\$217,737,404	\$430,758,722	\$736,318,727
17	298,906,795	591,339,416	1,010,807,823	1.4002	\$213,468,043	\$422,312,473	\$721,881,105
18	298,906,795	591,339,416	1,010,807,823	1.4282	\$209,282,395	\$414,031,836	\$707,726,574
19	298,906,795	591,339,416	1,010,807,823	1.4568	\$205,178,818	\$405,913,565	\$693,849,582
20	298,906,795	591,339,416	1,010,807,823	1.4859	\$201,155,704	\$397,954,475	\$680,244,688
21	262,933,829	520,100,457	889,085,879	1.5157	\$173,477,382	\$343,149,704	\$586,597,362
22	262,933,829	520,100,457	889,085,879	1.5460	\$170,075,864	\$336,421,278	\$575,095,453
23	262,933,829	520,100,457	889,085,879	1.5769	\$166,741,044	\$329,824,783	\$563,819,072
24	262,933,829	520,100,457	889,085,879	1.6084	\$163,471,611	\$323,357,630	\$552,763,796
25	262,933,829	520,100,457	889,085,879	1.6406	\$160,266,286	\$317,017,284	\$541,925,290
26	262,933,829	520,100,457	889,085,879	1.6734	\$157,123,809	\$310,801,259	\$531,299,304
27	262,933,829	520,100,457	889,085,879	1.7069	\$154,042,950	\$304,707,117	\$520,881,670
28	262,933,829	520,100,457	889,085,879	1.7410	\$151,022,500	\$298,732,467	\$510,668,304
29	262,933,829	520,100,457	889,085,879	1.7758	\$148,061,275	\$292,874,968	\$500,655,200
30	262,933,829	520,100,457	889,085,879	1.8114	\$145,158,113	\$287,132,322	\$490,838,432
31	262,658,324	519,348,056	887,948,242	1.8476	\$142,162,759	\$281,095,042	\$480,598,407

TABLE B-5b
Calculation of Present Values of Labor Income, Value Added, and Output
Manatee and DeSoto Counties and Pine Level/Keys Mine

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
32	262,658,324	519,348,056	887,948,242	1.8845	\$139,375,254	\$275,583,375	\$471,174,909
33	262,658,324	519,348,056	887,948,242	1.9222	\$136,642,406	\$270,179,779	\$461,936,185
34	262,658,324	519,348,056	887,948,242	1.9607	\$133,963,143	\$264,882,136	\$452,878,613
35	262,658,324	519,348,056	887,948,242	1.9999	\$131,336,415	\$259,688,369	\$443,998,640
36	262,658,324	519,348,056	887,948,242	2.0399	\$128,761,191	\$254,596,440	\$435,292,785
37	262,658,324	519,348,056	887,948,242	2.0807	\$126,236,462	\$249,604,353	\$426,757,632
38	262,658,324	519,348,056	887,948,242	2.1223	\$123,761,237	\$244,710,150	\$418,389,835
39	262,658,324	519,348,056	887,948,242	2.1647	\$121,334,546	\$239,911,912	\$410,186,113
40	262,658,324	519,348,056	887,948,242	2.2080	\$118,955,437	\$235,207,757	\$402,143,248
41	131,390,596	259,826,486	444,350,427	2.2522	\$58,338,766	\$115,365,613	\$197,296,127
42	131,390,596	259,826,486	444,350,427	2.2972	\$57,194,869	\$113,103,542	\$193,427,575
43	131,390,596	259,826,486	444,350,427	2.3432	\$56,073,401	\$110,885,826	\$189,634,878
44	131,390,596	259,826,486	444,350,427	2.3901	\$54,973,922	\$108,711,594	\$185,916,547
45	131,390,596	259,826,486	444,350,427	2.4379	\$53,896,002	\$106,579,994	\$182,271,124
46	131,390,596	259,826,486	444,350,427	2.4866	\$52,839,218	\$104,490,190	\$178,697,181
47	131,390,596	259,826,486	444,350,427	2.5363	\$51,803,155	\$102,441,363	\$175,193,314
48	131,390,596	259,826,486	444,350,427	2.5871	\$50,787,407	\$100,432,709	\$171,758,151
49	131,390,596	259,826,486	444,350,427	2.6388	\$49,791,575	\$98,463,440	\$168,390,345
50	131,390,596	259,826,486	444,350,427	2.6916	\$48,815,270	\$96,532,784	\$165,088,573
Total Present Value					\$6,427,451,796	\$12,718,915,453	\$21,741,480,611
Rounded Present Value					\$6,427,500,000	\$12,718,900,000	\$21,741,500,000

TABLE B-6a
10 Year Totals for Direct, Indirect, Induced, and Total Impacts by Decade
Hardee-County and Pioneer Mine

DECADE 1-10

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	2,141	250,203,988.0	506,344,794.0	855,563,487.0
Indirect Effect	270	17,262,745.0	37,407,884.0	66,943,828.0
Induced Effect	580	19,670,751.0	46,065,275.0	71,184,390.0
Total Effect	2,991	287,137,485.0	589,817,954.0	993,691,705.0

DECADE 11-20

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	1,838	214,897,846.0	434,774,714.0	734,661,392.0
Indirect Effect	231	14,818,969.0	32,121,303.0	57,487,579.0
Induced Effect	498	16,894,448.0	39,563,724.0	61,137,569.0
Total Effect	2,567	246,611,264.0	506,459,742.0	853,286,540.0

DECADE 21-30

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	2,040	239,461,766.0	483,952,254.0	817,756,529.0
Indirect Effect	256	16,474,659.0	35,743,605.0	63,963,508.0
Induced Effect	555	18,822,771.0	44,079,680.0	68,115,984.0
Total Effect	2,850	274,759,196.0	563,775,539.0	949,836,022.0

DECADE 31-40

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	1,669	196,201,386.0	396,352,947.0	669,786,135.0
Indirect Effect	209	13,487,640.0	29,276,082.0	52,397,986.0
Induced Effect	455	15,421,522.0	36,114,598.0	55,807,585.0
Total Effect	2,333	225,110,549.0	461,743,626.0	777,991,706.0

DECADE 41-50

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	10	135,819.0	795,564.0	1,606,889.0
Indirect Effect	3	56,343.0	99,954.0	238,988.0
Induced Effect	0	14,122.0	32,880.0	50,877.0
Total Effect	13	206,283.0	928,399.0	1,896,755.0

TABLE B-6b
Calculation of Present Values of Labor Income, Value Added, and Output
Hardee County and Pioneer Mine (2025)

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
1	287,137,485	589,817,954	993,691,705	1.0200	\$281,507,338	\$578,252,896	\$974,207,554
2	287,137,485	589,817,954	993,691,705	1.0404	\$275,987,587	\$566,914,604	\$955,105,445
3	287,137,485	589,817,954	993,691,705	1.0612	\$270,576,065	\$555,798,631	\$936,377,887
4	287,137,485	589,817,954	993,691,705	1.0824	\$265,270,652	\$544,900,619	\$918,017,537
5	287,137,485	589,817,954	993,691,705	1.1041	\$260,069,267	\$534,216,293	\$900,017,193
6	287,137,485	589,817,954	993,691,705	1.1262	\$254,969,869	\$523,741,464	\$882,369,797
7	287,137,485	589,817,954	993,691,705	1.1487	\$249,970,460	\$513,472,023	\$865,068,428
8	287,137,485	589,817,954	993,691,705	1.1717	\$245,069,079	\$503,403,944	\$848,106,302
9	287,137,485	589,817,954	993,691,705	1.1951	\$240,263,803	\$493,533,279	\$831,476,767
10	287,137,485	589,817,954	993,691,705	1.2190	\$235,552,748	\$483,856,156	\$815,173,301
11	246,611,264	506,459,742	853,286,540	1.2434	\$198,340,325	\$407,326,851	\$686,266,826
12	246,611,264	506,459,742	853,286,540	1.2682	\$194,451,299	\$399,340,050	\$672,810,614
13	246,611,264	506,459,742	853,286,540	1.2936	\$190,638,528	\$391,509,853	\$659,618,249
14	246,611,264	506,459,742	853,286,540	1.3195	\$186,900,518	\$383,833,189	\$646,684,557
15	246,611,264	506,459,742	853,286,540	1.3459	\$183,235,802	\$376,307,048	\$634,004,468
16	246,611,264	506,459,742	853,286,540	1.3728	\$179,642,943	\$368,928,479	\$621,573,008
17	246,611,264	506,459,742	853,286,540	1.4002	\$176,120,532	\$361,694,587	\$609,385,302
18	246,611,264	506,459,742	853,286,540	1.4282	\$172,667,188	\$354,602,536	\$597,436,571
19	246,611,264	506,459,742	853,286,540	1.4568	\$169,281,557	\$347,649,545	\$585,722,128
20	246,611,264	506,459,742	853,286,540	1.4859	\$165,962,311	\$340,832,888	\$574,237,380
21	274,759,196	563,775,539	949,836,022	1.5157	\$181,279,473	\$371,965,467	\$626,678,837
22	274,759,196	563,775,539	949,836,022	1.5460	\$177,724,973	\$364,672,026	\$614,391,017
23	274,759,196	563,775,539	949,836,022	1.5769	\$174,240,170	\$357,521,594	\$602,344,134
24	274,759,196	563,775,539	949,836,022	1.6084	\$170,823,696	\$350,511,367	\$590,533,465
25	274,759,196	563,775,539	949,836,022	1.6406	\$167,474,212	\$343,638,595	\$578,954,377
26	274,759,196	563,775,539	949,836,022	1.6734	\$164,190,404	\$336,900,583	\$567,602,331
27	274,759,196	563,775,539	949,836,022	1.7069	\$160,970,984	\$330,294,690	\$556,472,873
28	274,759,196	563,775,539	949,836,022	1.7410	\$157,814,690	\$323,818,323	\$545,561,640
29	274,759,196	563,775,539	949,836,022	1.7758	\$154,720,285	\$317,468,944	\$534,864,353
30	274,759,196	563,775,539	949,836,022	1.8114	\$151,686,554	\$311,244,063	\$524,376,817
31	225,110,549	461,743,626	777,991,706	1.8476	\$121,840,177	\$249,916,877	\$421,084,875

TABLE B-6b
Calculation of Present Values of Labor Income, Value Added, and Output
Hardee County and Pioneer Mine (2025)

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
32	225,110,549	461,743,626	777,991,706	1.8845	\$119,451,154	\$245,016,546	\$412,828,309
33	225,110,549	461,743,626	777,991,706	1.9222	\$117,108,975	\$240,212,300	\$404,733,636
34	225,110,549	461,743,626	777,991,706	1.9607	\$114,812,720	\$235,502,255	\$396,797,683
35	225,110,549	461,743,626	777,991,706	1.9999	\$112,561,491	\$230,884,563	\$389,017,336
36	225,110,549	461,743,626	777,991,706	2.0399	\$110,354,403	\$226,357,415	\$381,389,545
37	225,110,549	461,743,626	777,991,706	2.0807	\$108,190,591	\$221,919,034	\$373,911,319
38	225,110,549	461,743,626	777,991,706	2.1223	\$106,069,207	\$217,567,681	\$366,579,724
39	225,110,549	461,743,626	777,991,706	2.1647	\$103,989,418	\$213,301,648	\$359,391,886
40	225,110,549	461,743,626	777,991,706	2.2080	\$101,950,410	\$209,119,262	\$352,344,987
41	206,283	928,399	1,896,755	2.2522	\$91,592	\$412,219	\$842,179
42	206,283	928,399	1,896,755	2.2972	\$89,796	\$404,136	\$825,665
43	206,283	928,399	1,896,755	2.3432	\$88,035	\$396,212	\$809,476
44	206,283	928,399	1,896,755	2.3901	\$86,309	\$388,443	\$793,604
45	206,283	928,399	1,896,755	2.4379	\$84,617	\$380,826	\$778,043
46	206,283	928,399	1,896,755	2.4866	\$82,957	\$373,359	\$762,787
47	206,283	928,399	1,896,755	2.5363	\$81,331	\$366,038	\$747,830
48	206,283	928,399	1,896,755	2.5871	\$79,736	\$358,861	\$733,167
49	206,283	928,399	1,896,755	2.6388	\$78,173	\$351,825	\$718,791
50	206,283	928,399	1,896,755	2.6916	\$76,640	\$344,926	\$704,697
Total Present Value					\$7,174,571,042	\$14,731,725,016	\$24,821,234,698
Rounded Present Value					\$7,174,600,000	\$14,731,700,000	\$24,821,200,000

Attachment C
Cumulative Mining Cases
Economic Analysis Summary Information

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TABLE C-1a
10 Years Totals for Direct, Indirect, Induced, and Total Impacts by Decade
Cumulative Manatee and DeSoto Counties (Desoto, Wingate East, Pine Level/Keys Mines)

DECADE 11-10

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	923	105,657,949.7	214,147,177.2	361,534,578.0
Indirect Effect	233	11,263,493.9	17,143,078.5	35,954,662.9
Induced Effect	333	11,936,224.7	24,146,258.8	38,973,924.2
Total Effect	1,489	128,857,668.3	255,436,514.6	436,463,165.1

DECADE 11-20

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	1,541	179,573,903.5	363,158,592.2	613,263,327.0
Indirect Effect	385	18,956,044.3	28,948,617.4	60,799,934.5
Induced Effect	566	20,266,791.0	40,998,914.4	66,175,180.5
Total Effect	2,491	218,796,738.9	433,106,123.9	740,238,442.0

DECADE 21-30

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	2,710	319,502,783.0	645,193,204.0	1,089,745,512.0
Indirect Effect	673	33,514,344.0	51,292,362.0	107,830,750.0
Induced Effect	1,006	36,036,773.0	72,901,445.0	117,667,887.0
Total Effect	4,388	389,053,901.0	769,387,011.0	1,315,244,149.0

DECADE 31-40

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	2,031	239,675,246.0	483,917,281.0	817,405,208.0
Indirect Effect	504	25,128,256.0	38,467,367.0	80,884,279.0
Induced Effect	754	27,031,683.0	54,684,415.0	88,264,346.0
Total Effect	3,289	291,835,185.0	577,069,064.0	986,553,833.0

DECADE 41-50

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	1,935	229,325,488.0	462,762,449.0	781,776,629.0
Indirect Effect	479	23,987,658.0	36,754,770.0	77,320,323.0
Induced Effect	722	25,858,526.0	52,311,279.0	84,433,873.0
Total Effect	3,136	279,171,673.0	551,828,497.0	943,530,825.0

TABLE C-1b

Calculation of Present Values of Labor Income, Value Added, and Output*Cumulative Manatee and DeSoto Counties (Desoto, Wingate East, Pine Level/Keys Mines)*

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
1	128,857,668	255,436,515	436,463,165	1.0200	\$126,331,047	\$250,427,955	\$427,905,064
2	128,857,668	255,436,515	436,463,165	1.0404	\$123,853,968	\$245,517,603	\$419,514,768
3	128,857,668	255,436,515	436,463,165	1.0612	\$121,425,459	\$240,703,533	\$411,288,989
4	128,857,668	255,436,515	436,463,165	1.0824	\$119,044,567	\$235,983,856	\$403,224,499
5	128,857,668	255,436,515	436,463,165	1.1041	\$116,710,360	\$231,356,721	\$395,318,136
6	128,857,668	255,436,515	436,463,165	1.1262	\$114,421,922	\$226,820,315	\$387,566,800
7	128,857,668	255,436,515	436,463,165	1.1487	\$112,178,355	\$222,372,858	\$379,967,451
8	128,857,668	255,436,515	436,463,165	1.1717	\$109,978,779	\$218,012,606	\$372,517,109
9	128,857,668	255,436,515	436,463,165	1.1951	\$107,822,332	\$213,737,849	\$365,212,852
10	128,857,668	255,436,515	436,463,165	1.2190	\$105,708,169	\$209,546,910	\$358,051,815
11	218,796,739	433,106,124	740,238,442	1.2434	\$175,970,130	\$348,331,247	\$595,346,419
12	218,796,739	433,106,124	740,238,442	1.2682	\$172,519,735	\$341,501,223	\$583,672,960
13	218,796,739	433,106,124	740,238,442	1.2936	\$169,136,996	\$334,805,121	\$572,228,392
14	218,796,739	433,106,124	740,238,442	1.3195	\$165,820,584	\$328,240,314	\$561,008,227
15	218,796,739	433,106,124	740,238,442	1.3459	\$162,569,200	\$321,804,230	\$550,008,066
16	218,796,739	433,106,124	740,238,442	1.3728	\$159,381,568	\$315,494,343	\$539,223,594
17	218,796,739	433,106,124	740,238,442	1.4002	\$156,256,440	\$309,308,179	\$528,650,583
18	218,796,739	433,106,124	740,238,442	1.4282	\$153,192,588	\$303,243,313	\$518,284,885
19	218,796,739	433,106,124	740,238,442	1.4568	\$150,188,812	\$297,297,366	\$508,122,436
20	218,796,739	433,106,124	740,238,442	1.4859	\$147,243,933	\$291,468,006	\$498,159,251
21	389,053,901	769,387,011	1,315,244,149	1.5157	\$256,688,355	\$507,622,944	\$867,768,246
22	389,053,901	769,387,011	1,315,244,149	1.5460	\$251,655,250	\$497,669,553	\$850,753,182
23	389,053,901	769,387,011	1,315,244,149	1.5769	\$246,720,834	\$487,911,326	\$834,071,747
24	389,053,901	769,387,011	1,315,244,149	1.6084	\$241,883,170	\$478,344,437	\$817,717,399
25	389,053,901	769,387,011	1,315,244,149	1.6406	\$237,140,363	\$468,965,135	\$801,683,725
26	389,053,901	769,387,011	1,315,244,149	1.6734	\$232,490,552	\$459,769,740	\$785,964,436
27	389,053,901	769,387,011	1,315,244,149	1.7069	\$227,931,914	\$450,754,647	\$770,553,368
28	389,053,901	769,387,011	1,315,244,149	1.7410	\$223,462,660	\$441,916,320	\$755,444,479
29	389,053,901	769,387,011	1,315,244,149	1.7758	\$219,081,040	\$433,251,295	\$740,631,842
30	389,053,901	769,387,011	1,315,244,149	1.8114	\$214,785,333	\$424,756,171	\$726,109,649
31	291,835,185	577,069,064	986,553,833	1.8476	\$157,954,618	\$312,336,305	\$533,970,923

TABLE C-1b

Calculation of Present Values of Labor Income, Value Added, and Output*Cumulative Manatee and DeSoto Counties (Desoto, Wingate East, Pine Level/Keys Mines)*

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
32	291,835,185	577,069,064	986,553,833	1.8845	\$154,857,468	\$306,212,064	\$523,500,904
33	291,835,185	577,069,064	986,553,833	1.9222	\$151,821,047	\$300,207,906	\$513,236,181
34	291,835,185	577,069,064	986,553,833	1.9607	\$148,844,164	\$294,321,476	\$503,172,726
35	291,835,185	577,069,064	986,553,833	1.9999	\$145,925,651	\$288,550,467	\$493,306,594
36	291,835,185	577,069,064	986,553,833	2.0399	\$143,064,364	\$282,892,615	\$483,633,916
37	291,835,185	577,069,064	986,553,833	2.0807	\$140,259,180	\$277,345,701	\$474,150,898
38	291,835,185	577,069,064	986,553,833	2.1223	\$137,509,000	\$271,907,550	\$464,853,822
39	291,835,185	577,069,064	986,553,833	2.1647	\$134,812,745	\$266,576,029	\$455,739,041
40	291,835,185	577,069,064	986,553,833	2.2080	\$132,169,358	\$261,349,048	\$446,802,981
41	279,171,673	551,828,497	943,530,825	2.2522	\$123,955,073	\$245,017,487	\$418,884,303
42	279,171,673	551,828,497	943,530,825	2.2972	\$121,524,582	\$240,213,223	\$410,670,885
43	279,171,673	551,828,497	943,530,825	2.3432	\$119,141,747	\$235,503,160	\$402,618,515
44	279,171,673	551,828,497	943,530,825	2.3901	\$116,805,634	\$230,885,451	\$394,724,034
45	279,171,673	551,828,497	943,530,825	2.4379	\$114,515,328	\$226,358,285	\$386,984,347
46	279,171,673	551,828,497	943,530,825	2.4866	\$112,269,929	\$221,919,887	\$379,396,419
47	279,171,673	551,828,497	943,530,825	2.5363	\$110,068,558	\$217,568,517	\$371,957,273
48	279,171,673	551,828,497	943,530,825	2.5871	\$107,910,351	\$213,302,468	\$364,663,993
49	279,171,673	551,828,497	943,530,825	2.6388	\$105,794,462	\$209,120,066	\$357,513,719
50	279,171,673	551,828,497	943,530,825	2.6916	\$103,720,060	\$205,019,673	\$350,503,646
Total Present Value					\$7,704,517,735	\$15,243,247,950	\$26,056,255,488
Rounded Present Value					\$7,704,500,000	\$15,243,200,000	\$26,056,300,000

TABLE C-2a
10 Year Totals for Direct, Indirect, Induced, and Total Impacts by Decade
Cumulative All Existing, Applicants' Preferred, and Reasonably Foreseeable Mines

DECADE 11-10

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	4,133	476,390,856.6	984,751,867.7	1,663,479,945.0
Indirect Effect	1,935	120,957,445.6	201,234,800.7	380,375,903.4
Induced Effect	3,081	132,738,735.7	247,235,733.6	424,325,535.6
Total Effect	9,149	730,087,037.8	1,433,222,402.0	2,468,181,384.0

DECADE 11-20

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	3,698	426,785,618.6	882,183,632.9	1,490,228,839.0
Indirect Effect	1,732	108,338,182.0	180,266,879.6	340,746,546.8
Induced Effect	2,760	118,911,667.7	221,481,798.8	380,124,592.5
Total Effect	8,191	654,035,468.4	1,283,932,311.3	2,211,099,978.3

DECADE 21-30

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	4,518	525,865,484.0	1,086,299,002.0	1,835,097,486.0
Indirect Effect	2,122	133,258,973.0	221,911,222.0	419,488,476.0
Induced Effect	3,400	146,466,110.0	272,803,976.0	468,207,781.0
Total Effect	10,039	805,590,567.0	1,581,014,200.0	2,722,793,743.0

DECADE 31-40

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	3,364	391,366,228.0	808,446,324.0	1,365,826,117.0
Indirect Effect	1,580	99,186,357.0	165,171,975.0	312,243,799.0
Induced Effect	2,530	109,007,199.0	203,033,978.0	348,462,988.0
Total Effect	7,473	599,559,783.0	1,176,652,278.0	2,026,532,904.0

DECADE 41-50

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	3,194	373,214,159.0	770,637,863.0	1,302,112,173.0
Indirect Effect	1,502	94,503,544.0	157,446,806.0	297,664,620.0
Induced Effect	2,412	103,932,875.0	193,582,662.0	332,241,895.0
Total Effect	7,107	571,650,578.0	1,121,667,331.0	1,932,018,688.0

TABLE C-2b

Calculation of Present Values of Labor Income, Value Added, and Output*Cumulative All Existing, Applicants' Preferred, and Reasonably Foreseeable Alternatives*

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
1	730,087,038	1,433,222,402	2,468,181,384	1.0200	\$715,771,606	\$1,405,120,002	\$2,419,785,671
2	730,087,038	1,433,222,402	2,468,181,384	1.0404	\$701,736,868	\$1,377,568,629	\$2,372,338,893
3	730,087,038	1,433,222,402	2,468,181,384	1.0612	\$687,977,322	\$1,350,557,480	\$2,325,822,444
4	730,087,038	1,433,222,402	2,468,181,384	1.0824	\$674,487,570	\$1,324,075,961	\$2,280,218,082
5	730,087,038	1,433,222,402	2,468,181,384	1.1041	\$661,262,324	\$1,298,113,687	\$2,235,507,924
6	730,087,038	1,433,222,402	2,468,181,384	1.1262	\$648,296,396	\$1,272,660,477	\$2,191,674,435
7	730,087,038	1,433,222,402	2,468,181,384	1.1487	\$635,584,702	\$1,247,706,350	\$2,148,700,426
8	730,087,038	1,433,222,402	2,468,181,384	1.1717	\$623,122,257	\$1,223,241,520	\$2,106,569,046
9	730,087,038	1,433,222,402	2,468,181,384	1.1951	\$610,904,173	\$1,199,256,392	\$2,065,263,770
10	730,087,038	1,433,222,402	2,468,181,384	1.2190	\$598,925,660	\$1,175,741,561	\$2,024,768,402
11	654,035,468	1,283,932,311	2,211,099,978	1.2434	\$526,016,553	\$1,032,619,303	\$1,778,305,988
12	654,035,468	1,283,932,311	2,211,099,978	1.2682	\$515,702,503	\$1,012,371,865	\$1,743,437,243
13	654,035,468	1,283,932,311	2,211,099,978	1.2936	\$505,590,690	\$992,521,437	\$1,709,252,199
14	654,035,468	1,283,932,311	2,211,099,978	1.3195	\$495,677,147	\$973,060,232	\$1,675,737,450
15	654,035,468	1,283,932,311	2,211,099,978	1.3459	\$485,957,987	\$953,980,620	\$1,642,879,853
16	654,035,468	1,283,932,311	2,211,099,978	1.3728	\$476,429,399	\$935,275,117	\$1,610,666,523
17	654,035,468	1,283,932,311	2,211,099,978	1.4002	\$467,087,646	\$916,936,389	\$1,579,084,826
18	654,035,468	1,283,932,311	2,211,099,978	1.4282	\$457,929,065	\$898,957,245	\$1,548,122,379
19	654,035,468	1,283,932,311	2,211,099,978	1.4568	\$448,950,063	\$881,330,632	\$1,517,767,038
20	654,035,468	1,283,932,311	2,211,099,978	1.4859	\$440,147,121	\$864,049,639	\$1,488,006,900
21	805,590,567	1,581,014,200	2,722,793,743	1.5157	\$531,509,174	\$1,043,114,935	\$1,796,435,526
22	805,590,567	1,581,014,200	2,722,793,743	1.5460	\$521,087,426	\$1,022,661,701	\$1,761,211,300
23	805,590,567	1,581,014,200	2,722,793,743	1.5769	\$510,870,025	\$1,002,609,511	\$1,726,677,745
24	805,590,567	1,581,014,200	2,722,793,743	1.6084	\$500,852,966	\$982,950,501	\$1,692,821,318
25	805,590,567	1,581,014,200	2,722,793,743	1.6406	\$491,032,320	\$963,676,962	\$1,659,628,744
26	805,590,567	1,581,014,200	2,722,793,743	1.6734	\$481,404,235	\$944,781,335	\$1,627,087,003
27	805,590,567	1,581,014,200	2,722,793,743	1.7069	\$471,964,936	\$926,256,211	\$1,595,183,337
28	805,590,567	1,581,014,200	2,722,793,743	1.7410	\$462,710,722	\$908,094,324	\$1,563,905,232
29	805,590,567	1,581,014,200	2,722,793,743	1.7758	\$453,637,962	\$890,288,553	\$1,533,240,424
30	805,590,567	1,581,014,200	2,722,793,743	1.8114	\$444,743,100	\$872,831,915	\$1,503,176,886
31	599,559,783	1,179,591,131	2,031,399,508	1.8476	\$324,509,316	\$638,448,946	\$1,099,486,796

TABLE C-2b

Calculation of Present Values of Labor Income, Value Added, and Output*Cumulative All Existing, Applicants' Preferred, and Reasonably Foreseeable Alternatives*

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
32	599,559,783	1,179,591,131	2,031,399,508	1.8845	\$318,146,388	\$625,930,339	\$1,077,928,232
33	599,559,783	1,179,591,131	2,031,399,508	1.9222	\$311,908,224	\$613,657,195	\$1,056,792,384
34	599,559,783	1,179,591,131	2,031,399,508	1.9607	\$305,792,376	\$601,624,701	\$1,036,070,965
35	599,559,783	1,179,591,131	2,031,399,508	1.9999	\$299,796,447	\$589,828,138	\$1,015,755,848
36	599,559,783	1,179,591,131	2,031,399,508	2.0399	\$293,918,086	\$578,262,881	\$995,839,066
37	599,559,783	1,179,591,131	2,031,399,508	2.0807	\$288,154,986	\$566,924,393	\$976,312,810
38	599,559,783	1,179,591,131	2,031,399,508	2.1223	\$282,504,888	\$555,808,228	\$957,169,422
39	599,559,783	1,179,591,131	2,031,399,508	2.1647	\$276,965,577	\$544,910,028	\$938,401,394
40	599,559,783	1,179,591,131	2,031,399,508	2.2080	\$271,534,879	\$534,225,517	\$920,001,366
41	571,650,578	1,121,667,331	1,932,018,688	2.2522	\$253,818,694	\$498,031,748	\$857,836,025
42	571,650,578	1,121,667,331	1,932,018,688	2.2972	\$248,841,857	\$488,266,420	\$841,015,711
43	571,650,578	1,121,667,331	1,932,018,688	2.3432	\$243,962,605	\$478,692,569	\$824,525,207
44	571,650,578	1,121,667,331	1,932,018,688	2.3901	\$239,179,024	\$469,306,440	\$808,358,046
45	571,650,578	1,121,667,331	1,932,018,688	2.4379	\$234,489,239	\$460,104,353	\$792,507,888
46	571,650,578	1,121,667,331	1,932,018,688	2.4866	\$229,891,411	\$451,082,699	\$776,968,518
47	571,650,578	1,121,667,331	1,932,018,688	2.5363	\$225,383,736	\$442,237,940	\$761,733,841
48	571,650,578	1,121,667,331	1,932,018,688	2.5871	\$220,964,447	\$433,566,608	\$746,797,883
49	571,650,578	1,121,667,331	1,932,018,688	2.6388	\$216,631,811	\$425,065,302	\$732,154,788
50	571,650,578	1,121,667,331	1,932,018,688	2.6916	\$212,384,129	\$416,730,688	\$717,798,811
Total Present Value					\$21,546,148,040	\$42,304,771,607	\$72,856,162,947
Rounded Present Value					\$21,546,100,000	\$42,304,800,000	\$72,856,200,000

TABLE C-3a

Average Annual Direct, Indirect, Induced, and Total Impacts by Decade*Hardee County Cumulative (Ona Mine, South Pasture Mine Extension, Pioneer Mine)***DECADE 11-10**

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	2,389	279,556,747.9	565,540,232.8	955,563,487.0
Indirect Effect	300	19,272,064.7	41,774,397.8	74,751,016.1
Induced Effect	648	21,977,268.8	51,466,785.0	79,531,285.1
Total Effect	3,338	320,806,081.4	658,781,415.5	1,109,845,788.2

DECADE 11-20

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	2,186	256,169,529.0	518,006,818.3	875,262,805.0
Indirect Effect	275	17,644,038.9	38,260,376.1	68,463,187.2
Induced Effect	594	20,137,534.9	47,158,535.1	72,873,748.5
Total Effect	3,054	293,951,102.8	603,425,729.6	1,016,599,740.7

DECADE 21-30

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	1,856	217,706,108.5	440,085,328.1	743,636,256.0
Indirect Effect	233	14,985,436.3	32,506,195.4	58,172,141.3
Induced Effect	505	17,113,231.0	40,076,198.6	61,929,447.6
Total Effect	2,593	249,804,775.7	512,667,722.2	863,737,844.9

DECADE 31-40

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	1,364	160,063,642.1	323,508,561.4	546,705,192.0
Indirect Effect	171	11,015,573.8	23,900,729.3	42,782,640.3
Induced Effect	371	12,581,971.3	29,464,794.9	45,531,720.0
Total Effect	1,906	183,661,187.2	376,874,085.7	635,019,552.3

DECADE 41-50

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	1,293	151,960,281.1	306,992,673.5	518,853,680.0
Indirect Effect	162	10,449,718.0	22,684,565.7	40,616,108.6
Induced Effect	352	11,944,398.7	27,971,754.4	43,224,520.4
Total Effect	1,807	174,354,397.9	357,648,993.6	602,694,309.0

TABLE C-3b

Calculation of Present Values of Labor Income, Value Added and Output*Hardee County Cumulative (Ona Mine, South Pasture Mine Extension, Pioneer Mine)*

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
1	320,806,081	658,781,416	1,109,845,788	1.0200	\$314,515,766	\$645,864,133	\$1,088,084,106
2	320,806,081	658,781,416	1,109,845,788	1.0404	\$308,348,790	\$633,200,130	\$1,066,749,124
3	320,806,081	658,781,416	1,109,845,788	1.0612	\$302,302,736	\$620,784,441	\$1,045,832,474
4	320,806,081	658,781,416	1,109,845,788	1.0824	\$296,375,231	\$608,612,197	\$1,025,325,955
5	320,806,081	658,781,416	1,109,845,788	1.1041	\$290,563,952	\$596,678,625	\$1,005,221,525
6	320,806,081	658,781,416	1,109,845,788	1.1262	\$284,866,619	\$584,979,044	\$985,511,299
7	320,806,081	658,781,416	1,109,845,788	1.1487	\$279,280,999	\$573,508,867	\$966,187,548
8	320,806,081	658,781,416	1,109,845,788	1.1717	\$273,804,901	\$562,263,595	\$947,242,694
9	320,806,081	658,781,416	1,109,845,788	1.1951	\$268,436,178	\$551,238,818	\$928,669,308
10	320,806,081	658,781,416	1,109,845,788	1.2190	\$263,172,723	\$540,430,214	\$910,460,106
11	293,951,103	603,425,730	1,016,599,741	1.2434	\$236,414,007	\$485,313,011	\$817,613,597
12	293,951,103	603,425,730	1,016,599,741	1.2682	\$231,778,438	\$475,797,070	\$801,581,958
13	293,951,103	603,425,730	1,016,599,741	1.2936	\$227,233,763	\$466,467,715	\$785,864,665
14	293,951,103	603,425,730	1,016,599,741	1.3195	\$222,778,199	\$457,321,290	\$770,455,553
15	293,951,103	603,425,730	1,016,599,741	1.3459	\$218,409,999	\$448,354,206	\$755,348,582
16	293,951,103	603,425,730	1,016,599,741	1.3728	\$214,127,450	\$439,562,947	\$740,537,825
17	293,951,103	603,425,730	1,016,599,741	1.4002	\$209,928,873	\$430,944,065	\$726,017,476
18	293,951,103	603,425,730	1,016,599,741	1.4282	\$205,812,620	\$422,494,182	\$711,781,839
19	293,951,103	603,425,730	1,016,599,741	1.4568	\$201,777,079	\$414,209,982	\$697,825,332
20	293,951,103	603,425,730	1,016,599,741	1.4859	\$197,820,666	\$406,088,218	\$684,142,483
21	249,804,776	512,667,722	863,737,845	1.5157	\$164,815,150	\$338,245,765	\$569,873,342
22	249,804,776	512,667,722	863,737,845	1.5460	\$161,583,480	\$331,613,495	\$558,699,355
23	249,804,776	512,667,722	863,737,845	1.5769	\$158,415,177	\$325,111,270	\$547,744,466
24	249,804,776	512,667,722	863,737,845	1.6084	\$155,308,997	\$318,736,539	\$537,004,378
25	249,804,776	512,667,722	863,737,845	1.6406	\$152,263,722	\$312,486,803	\$526,474,881
26	249,804,776	512,667,722	863,737,845	1.6734	\$149,278,159	\$306,359,611	\$516,151,844
27	249,804,776	512,667,722	863,737,845	1.7069	\$146,351,136	\$300,352,560	\$506,031,219
28	249,804,776	512,667,722	863,737,845	1.7410	\$143,481,506	\$294,463,294	\$496,109,038
29	249,804,776	512,667,722	863,737,845	1.7758	\$140,668,143	\$288,689,504	\$486,381,410
30	249,804,776	512,667,722	863,737,845	1.8114	\$137,909,945	\$283,028,925	\$476,844,520
31	183,661,187	376,874,086	635,019,552	1.8476	\$99,405,877	\$203,981,580	\$343,701,773

TABLE C-3b

Calculation of Present Values of Labor Income, Value Added and Output*Hardee County Cumulative (Ona Mine, South Pasture Mine Extension, Pioneer Mine)*

Years	Labor Income	Value Added	Output	Discount Factor 2.0%	Present Value		
					Labor Income (B/E)	Value Added (C/E)	Output (D/E)
32	183,661,187	376,874,086	635,019,552	1.8845	\$97,456,742	\$199,981,941	\$336,962,523
33	183,661,187	376,874,086	635,019,552	1.9222	\$95,545,826	\$196,060,727	\$330,355,415
34	183,661,187	376,874,086	635,019,552	1.9607	\$93,672,378	\$192,216,399	\$323,877,857
35	183,661,187	376,874,086	635,019,552	1.9999	\$91,835,665	\$188,447,450	\$317,527,311
36	183,661,187	376,874,086	635,019,552	2.0399	\$90,034,966	\$184,752,402	\$311,301,285
37	183,661,187	376,874,086	635,019,552	2.0807	\$88,269,574	\$181,129,805	\$305,197,339
38	183,661,187	376,874,086	635,019,552	2.1223	\$86,538,798	\$177,578,241	\$299,213,077
39	183,661,187	376,874,086	635,019,552	2.1647	\$84,841,959	\$174,096,314	\$293,346,154
40	183,661,187	376,874,086	635,019,552	2.2080	\$83,178,391	\$170,682,661	\$287,594,269
41	174,320,670	357,493,733	602,429,048	2.2522	\$77,400,157	\$158,730,868	\$267,484,649
42	174,320,670	357,493,733	602,429,048	2.2972	\$75,882,507	\$155,618,498	\$262,239,852
43	174,320,670	357,493,733	602,429,048	2.3432	\$74,394,615	\$152,567,155	\$257,097,894
44	174,320,670	357,493,733	602,429,048	2.3901	\$72,935,897	\$149,575,642	\$252,056,759
45	174,320,670	357,493,733	602,429,048	2.4379	\$71,505,781	\$146,642,786	\$247,114,469
46	174,320,670	357,493,733	602,429,048	2.4866	\$70,103,707	\$143,767,438	\$242,269,088
47	174,320,670	357,493,733	602,429,048	2.5363	\$68,729,125	\$140,948,468	\$237,518,713
48	174,320,670	357,493,733	602,429,048	2.5871	\$67,381,495	\$138,184,773	\$232,861,484
49	174,320,670	357,493,733	602,429,048	2.6388	\$66,060,289	\$135,475,267	\$228,295,572
50	174,320,670	357,493,733	602,429,048	2.6916	\$64,764,989	\$132,818,890	\$223,819,188
Total Present Value					\$8,177,763,148	\$16,786,457,818	\$28,281,602,571
Rounded Present Value					\$8,177,800,000	\$16,786,500,000	\$28,281,600,000

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